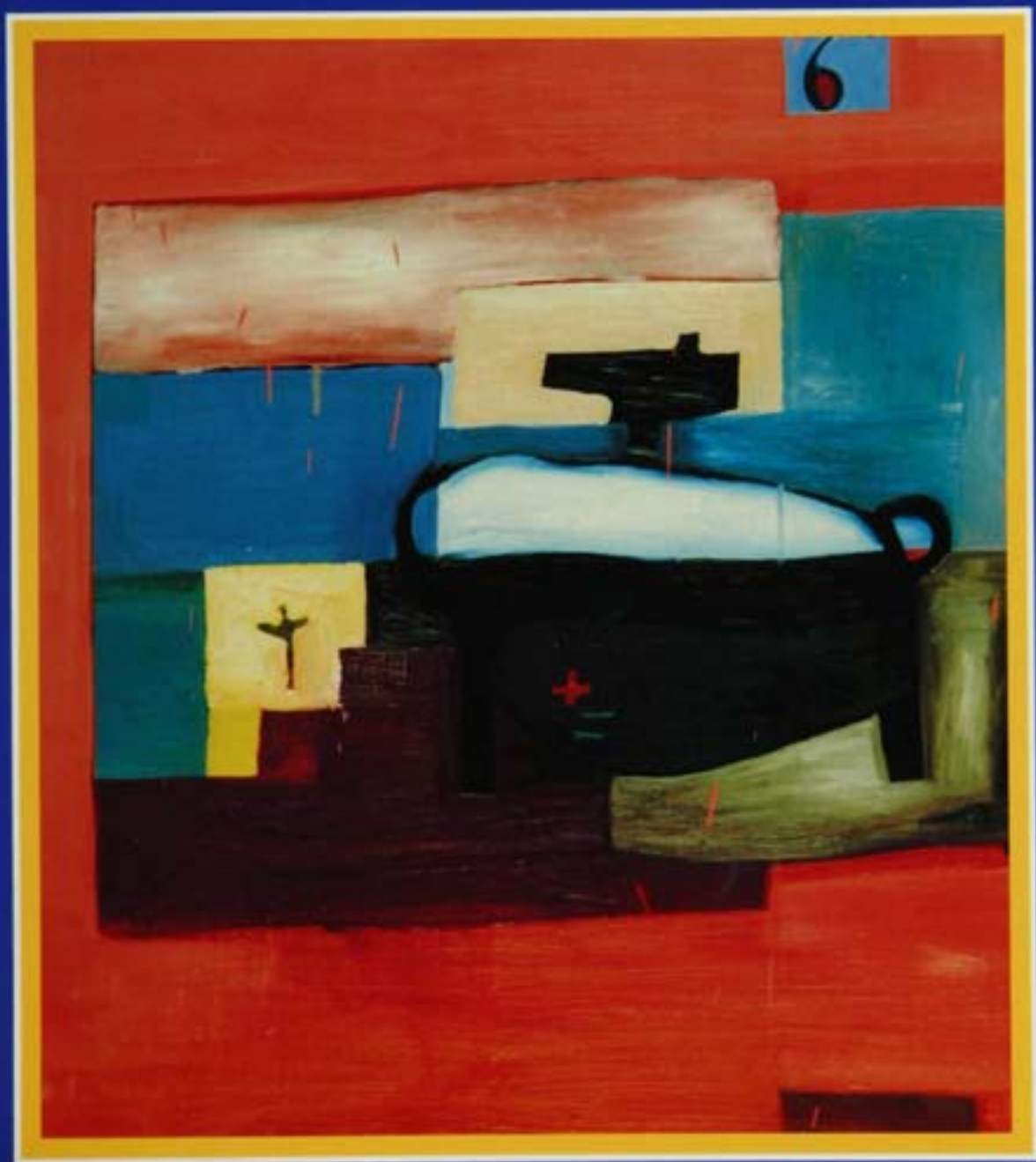


# UNIVERSITY OF WOLLONGONG



## ANNUAL REPORT 1992

## Front cover

*Detail from "Container of small things" an oil painting by LISA HAVILAH, Bachelor of Creative Arts, University of Wollongong, and winner of the 1992 University Union Art Prize. Lisa Havilah is currently studying Arts/Law at the University. Her work is exhibited in the University's Permanent Collection and in private collections and galleries.*

# UNIVERSITY OF WOLLONGONG



## Arms of the University

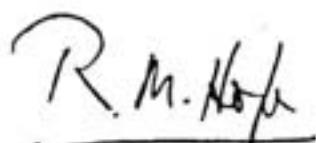
The principal elements incorporated in the arms of the University are the blue of the sea, the gold of the sand and the red of the Illawarra flame tree. The open book often used for educational institutions is also included. The blazon is: Azure an open book proper bound gold on a chief wavy of three cinquefoils gules

# ANNUAL REPORT 1992

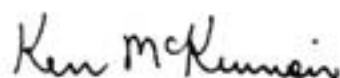
The Honourable Virginia Chadwick, MP, Minister for Education

Dear Minister

In accordance with section 10(i) of the Annual Reports (Statutory Bodies) Act, 1984, and Section 34 of the Public Finance and Audit Act, 1983, the Council of the University has the honour to present to you, for tabling to the Parliament, the *Annual Report* of the proceedings of the University for the period 1 January to 31 December 1992



Chancellor



Vice-Chancellor and Principal

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THE INTRODUCTION to the 1991 Annual Report ended on an optimistic note that has been well justified by the developments of 1992. During the year, the University took the bold step of identifying clearly, in a public document, detailed objectives and the strategies for achieving them in two four-year stages. The publication of the planning document, TOWARDS 2000, in July 1992 was a landmark in the Australian university scene. The concentration on strengths and common goals was another significant step in the development of an assured, forward-looking campus community.

The Faculty entries in this report give clear evidence of a focusing of talent and energy. The Faculties measure up well against their planning objectives, particularly in the development of an 'international' mentality. Strong examples are the Faculty of Arts' Japanese language initiative and the overseas collaborative projects in the Faculty of Engineering. It was also pleasing to note that the Faculty of Science achieved its goal of placing on the books a range of 'professionally relevant specialist degrees' including the Bachelor of Medicinal Chemistry and the Bachelor of Medical Physics.

Many of the Faculty projects and achievements involved the collaboration between disciplines which is central to the TOWARDS 2000 planning agenda.

Possibilities for further academic achievement were enhanced by the appointment of high-calibre senior staff. Professor Jennifer Seberry, an expert in computer security, joined the Faculty of Informatics and Professor Gill Palmer arrived to head the Management Department in Commerce. Professor John Morrison took up the BHP Chair in Environmental Science: his arrival was important for the University's initiative in environmental studies involving the Faculties of Science, Engineering and Arts.

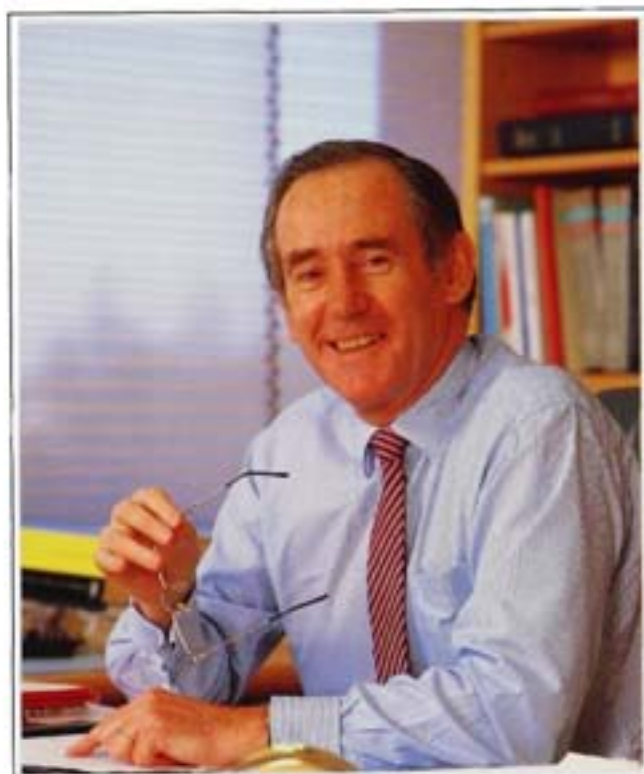
During the year, the University's Administration committed itself even more enthusiastically to a credo of service including staff evaluation, goal-setting and quality control. The results, by year's end, earned the rare accolade of general academic approval.

Student enrolments remained buoyant despite an upward trend in entry scores. The University enrolled 8786 (7492 EFTSU) undergraduate and 2126 (1414 EFTSU) postgraduate students in 1992. Student morale was also high despite the effects of the recession on their overall welfare and career prospects. A key factor in achieving this was the University's commitment to containing its growth so that students and staff could still work together at a personal level.

The creation of a Dean of Students position, filled with distinction first by Professor Murray Wilson and then Ms Josephine Castle, has also given students a 'champion' who can operate on equal terms with the University management. Finally, the 1992 Students Representative Council (SRC) approached its task with zeal and commendable efficiency. Notable among its achievements was the reshaping of *Tertangala*, the student newspaper, as a professional, informative journal. Student irreverence is still, thankfully, alive in its pages but *Tertangala* gives student journalists the opportunity to research and write insightful articles and to provide useful guides for their fellow students.

Among the bodies affiliated with the University, the Union, the Illawarra Technology Corporation (ITC) and the Community Affairs/Outreach programs took significant steps forward in 1992.

The Union saw the successful completion of a major extension which provided a Functions Centre, bookshop and retail centre and offices. The extensive refurbishment of the Union hall to provide a 1000 seat 'almost great' Hall also began during the year and the Union is to be congratulated



*The Vice-Chancellor and Principal, Professor Ken McKinnon*



for the way in which it continued to give service to the campus community despite construction work.

At the ITC, turnover was quickening despite the difficulties caused by the economic climate. The Corporation was confident in cementing relationships with the academic community and in reaching out to external markets for the exciting research and development projects nurtured under its wing. Telecom Australia and Nortel both set up substantial research and development laboratories at the ITC. As one result of ITC's reputation and of the world-class calibre of the University's telecommunication research centre, Telecom announced in December that it would use the University and the Wollongong area to trial its optical fibre network.

The University also moved to give a more coherent image to its outreach and development activities. The Friends of the University, the Alumni Association, the University Foundation and the Co-operative Scholarship Program were brought together in the Office of Development and Community Affairs located in the new Union extension. The year was therefore one of 'bringing together' ideas and key activities both physically and in the framework of planning objectives. The exercise did not limit the University's ambitions; rather, it gave them context. Thus, at year's end, major initiatives were in train to carry forward the University's objectives for the development of strategic alliances, investment in the new technologies and raising public awareness of the University in the region and beyond.

The University formed an alliance with the Special Broadcasting Service (SBS) to offer professional training courses by television, using programs developed by the University and by the National Technology University in the United States. The project is an innovative one involving the construction of a state-of-the-art Communications Centre on campus and the offering of higher-education opportunities to those seeking to upgrade their qualifications, especially in the areas of technology and its management.

The second initiative is the establishment of a second campus in the Shoalhaven region. Graham Park in Berry has been chosen as the first site for extending the University's



*A glimpse of the future: construction on campus of the \$4 million Multimedia and Open Learning Laboratory (MOLAB), located to the north west of the Pentagon, began in the second half of 1992. The project involves an extension to the Pentagon to provide studios and laboratories to facilitate transmission and receiving of educational material electronically; and refurbishment of lecture theatres to incorporate the state-of-the-art multimedia teaching aids. In addition, there will be increased comfort for students*

presence to meet demand from the South Coast. The prospects are particularly attractive for opening up opportunities for students who previously would have had to travel long distances and for special groups such as the Aboriginal community. The University is looking forward to developing, from this small beginning, a healthy and active campus to the south.

Again I end on a positive note. Under the wise direction of its Council, with the co-operation and energy of its staff and the enthusiasm of its students, this University continued its advance in 1992. This success is due to its ability to think for the future despite the difficulties of the present. Universities clever enough to chart and follow with determination their own course, while flexible enough to accommodate external changes, will always be successful.

## CHARTER

**T**HE University of Wollongong was established and incorporated by an Act of the New South Wales Parliament: 'The University of Wollongong Act, 1972' and commenced on 1 January 1975. An amending Act, 'The University of Wollongong (Advanced Education) Amendment Act, 1982' led to the amalgamation of the former Wollongong Institute of Education with the University.

A new Act, the University of Wollongong Act 1989, came into effect on 1 January 1990.

The aims of the University are contained in Section 6 (i) of the Act, which states that the University shall, within the limits of its resources:

- a) provide educational facilities of university standard, having particular regard to the needs of the Illawarra region;
- b) disseminate and increase knowledge and promote scholarship; and
- c) confer degrees of Bachelor, Master and Doctor and award diplomas and other certificates.

The University is governed by the Council, consisting of ex-officio members (the Chancellor, the Vice-Chancellor and the Chairperson of the Academic Senate), four Ministerial nominees, two members elected by Parliament, one member elected by students, three members elected by academic and general staff, four members elected by the Convocation and one member appointed by Council. There is one major Committee of Council, the Administrative Committee.

The major academic body providing advice to Council on academic matters is the Academic Senate.



# PLANNING AND PERFORMANCE

**T**HE UNIVERSITY'S corporate plan for the current decade is detailed in the landmark publication TOWARDS 2000 which the Vice-Chancellor mentions in his Overview. TOWARDS 2000 sets down, in succinct and measurable form, the University's objectives and the strategies for achieving them. As such it is a crucial step in the quality assessment process to which the University is committed. (TOWARDS 2000 is the source document for this section of the *Annual Report*).



## ***Mission Statement***

The mission of the University of Wollongong is to produce graduates and research of international distinction especially in the development, critical evaluation and application of science and technology for industry, commerce and society.

## ***Objectives***

- To be established in the top ten Australian universities, known for the excellence of its teaching, research and international programs by the Year 2000.
- To invest in new technologies, ideas and methods of teaching and research so as to remain at the forefront of developments in university education.

- To continue to attract an increasing proportion of outstanding students from both within Australia and overseas.
- To limit growth to about 10,700 EFTSU by the Year 2000.
- To have 23 per cent of enrolments in postgraduate and research courses.
- To provide a broad education which enables all students to develop appropriate professional skills in addition to specific skills in research, communication, computer literacy, logical exposition and quantitative analysis.
- To produce morally and socially responsible graduates.
- To provide an internationally-orientated intellectual environment which rewards performance.
- To foster among staff and students a reflective culture engendering self-confidence, social responsibility, co-operation, receptiveness to new ideas, advocacy skills and collegial relationships.
- To implement a career development program which will attract and retain staff of the highest calibre.
- To have management processes which are open, responsive, accountable and committed to campus communication.
- To identify and commit resources and vigour to selected research areas and seek to be national leader in a number of those areas.
- To develop further strategic alliances with industry, commerce and the community.
- To continue to raise public awareness of the University's aspirations, achievements, physical environment and dynamic characteristics.
- To actively seek out further non-government sources of funding so as to increase the University's independence.

## ***Values***

In pursuit of its objectives, the University community is guided by the following values:

**Excellence:** Excellence in all learning, teaching and research activities.

**Ethical Standards:** High ethical standards – including accuracy, honesty, co-operation, tolerance and acceptance of obligations as well as rights.

**International Attitudes:** International perspectives in courses, within the student body, among staff and in University processes.

**Fairness:** In access for young and old, resident and non-resident students.

**Nurturing:** Appropriate support mechanisms to assist student growth and learning.

**Accountability:** To the students, to the University community, to the public and to governments.

**Intellectual Openness:** Creativity, open examination of ideas and evidence and questioning of accepted wisdom.

**Theory and Practice:** Commitment to research and teaching, embracing both theory and practice.

### Key Performance Targets, 1992-2000

The general statement on Performance Indicators below is extracted from TOWARDS 2000. Each Faculty and Unit has detailed its own quantitative and qualitative performance targets which are listed in specific chapters of TOWARDS 2000. During 1992, the University began to refine the procedures for measuring its achievement of the targets identified in the plan for the years 1992 – 2000.

#### Graduates

Further increase the production of graduates by the Year 2000:

Course	1991	2000
PhD	39	80
Other Research Higher Degree	23	50
Postgraduate Coursework	339	470
Bachelor	1430	2000

- Improve average rates of completion in minimum time by 20 per cent.

#### Attrition and Retention

- Lift median Tertiary Entrance Rank Score from 73.55 (321) to 84.10 (360).
- Use additional means of determining entry suitability.
- Improve progression rates without lowering minimum standards.

### Enrolments and Load

#### • Total

	1992	1994	1996	1998	2000
<i>Undergraduate</i>					
Nos	8786	8652	9080	9407	9557
EFTSU	7492	7430	7806	8095	8232
<i>Postgraduate *</i>					
Nos	2126	2613	2981	3356	3743
EFTSU	1414	1738	1979	2225	2472
<i>Total</i>					
Nos	10912	11265	12061	12763	13300
EFTSU	8906	9168	9785	10320	10704

\* Postgraduate proportion to increase to 23 per cent of total load.

#### • Domestic Funded Load (EFTSU)

	1992	1994	1996	1998	2000
Undergraduate	6775	6640	6917	7139	7210
Postgraduate	1078	1358	1530	1715	1905
Total	7853	7998	8447	8854	9115
Commencing	3320	3001	3180	3307	3417

#### • International Student Load (EFTSU)

	1992	1994	1996	1998	2000
Undergraduate	717	790	889	956	1022
Postgraduate	336	380	449	510	567
Total	1053	1170	1338	1466	1589
Commencing	576	605	689	748	806

\* 14.8 per cent of all load to come from International Students.

#### • Faculty Load (EFTSU)

	1992	1994	1996	1998	2000
Arts	1438	1426	1513	1605	1702
Commerce	2423	2441	2567	2605	2622
Education	897	949	1019	1094	1173
Engineering	569	587	622	634	645
Health & Behavioural Sciences	1186	1127	1228	1418	1486
Informatics	1113	1229	1343	1382	1400
Law	378	474	503	534	566
Science	902	935	990	1048	1110
TOTAL	8906	9168	9785	10320	10704

- Increase by a minimum of 10 per cent per annum number of students indicating the University as a first preference.
- Increase from 27.5 per cent to 35 per cent proportion of students indicating the University



as a first preference and subsequently enrolling.

- Increase from 69.4 per cent to 80 per cent proportion of students who are made offers and subsequently enrol.

## Equity

Selected Equity Groups (EFTSU)					
	1992	1994	1996	1998	2000
Aboriginal & Torres Strait Islanders	75	118	155	185	201
Rural/Isolated	560	736	908	1068	1231
Women in non-traditional UG areas (i)	737	900	1081	1246	1367
Women in PG Res and PG Cwk (ii)	430	654	865	1068	1276

(i) Areas extend to Science, Environmental Science, Engineering, Information Technology and Communication, Mathematics and Computer Science (in accordance with Department of Employment, Education and Training guidelines).

(ii) Excludes Postgraduate Diplomas.

PR Res – Postgraduate Research; PG Cwk – Postgraduate Coursework; UG – Undergraduate.

- Continue strong commitment to students from low socio-economic and non-English-speaking backgrounds as well as those with disabilities.

## Staff

	1992	1994	1996	1998	2000
Academic and Support staff in Faculties	828	908	959	1000	1038
Total	1406	1525	1586	1637	1688

## Research and Scholarship

- Develop world research and scholarship strengths in:
  - ☐ Telecommunications – Advanced Materials
  - ☐ Manufacturing and Robotics – Bioactive Molecules
  - ☐ Resources and Technology Law – Public Policy
  - ☐ Environment – Australian and Pacific Rim Studies
  - ☐ Health Development – Computer and Communication Security
- Develop research and scholarship strengths in faculties and departments.
- Increase input funding from Australian Research Council (ARC) from \$4.3 million to \$10 million.

- Increase input research funding from other sources from \$6.4 million to \$15 million.

## Library and Information Technology

- Achieve electronic access for all academics to world data bases.
- Increased student computer and information searching literacy to a high level.
- Library holdings to increase to 800,000 volumes and a dramatic increase in CD-ROM and other technologies.
- Achieve broad band network access and exchanges internationally.

## Buildings and Facilities

- Construction of six major academic buildings (including Keira View and Engineering already planned).
- Increase gross floor space by 40,000 sq metres to 160,000 sq metres and net usable from 78,000 sq metres to 105,000 sq metres.
- Complete new Union Hall.
- Provide increased union facilities in Keira View building taking provision to 10,000 sq metres.
- Increase student residential accommodation from 832 to 1,600 places.
- Construct 600 new parking places, 300 in high rise.
- Further pondage and landscaping and continue tree-planting at current rate.

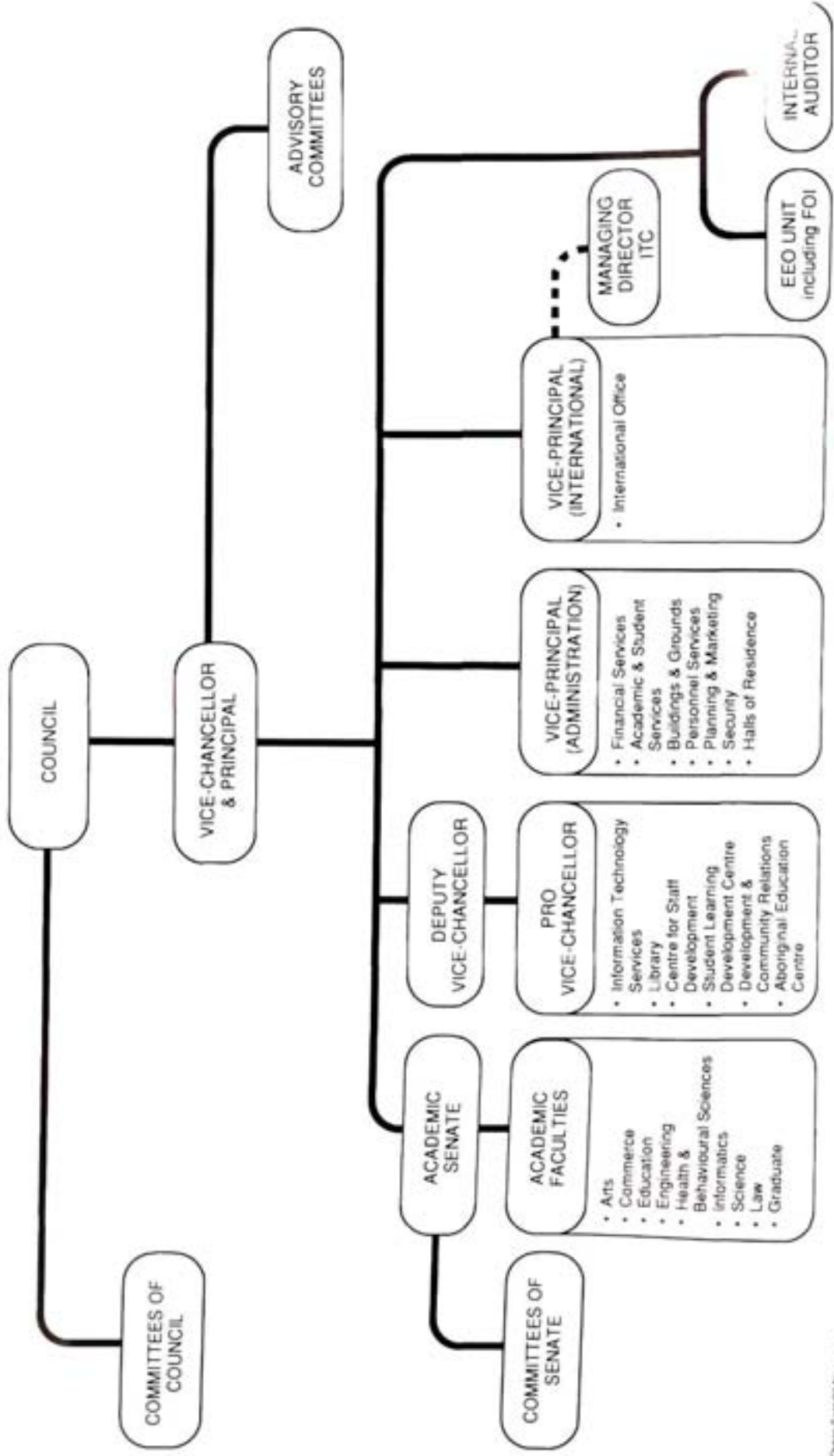
## Consumer Response

In 1992, the University surveyed two major 'consumer' groups - students (current and graduating) and employers. A survey of general community opinion was also designed during the year for distribution in 1993.

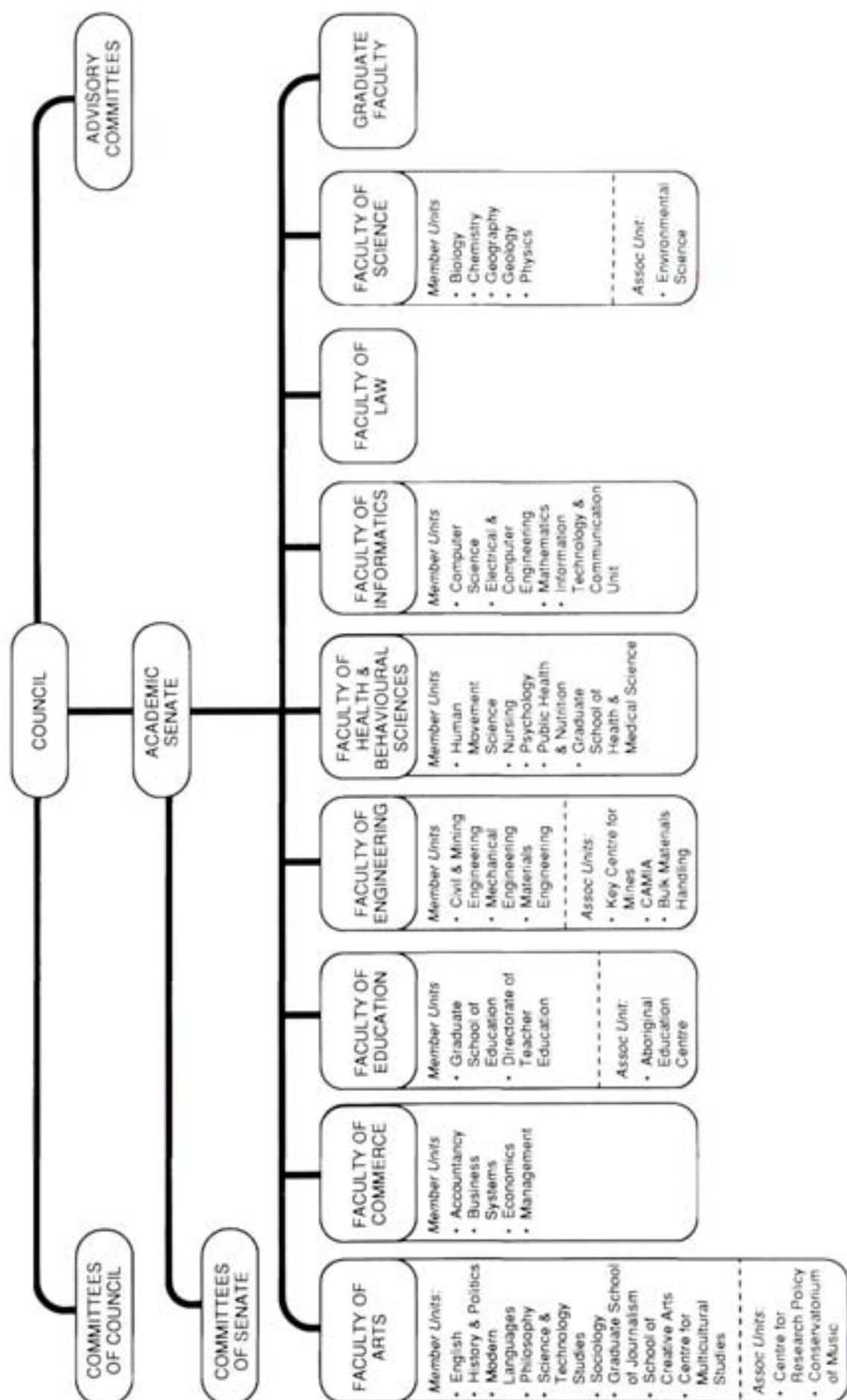
The results of the completed surveys were tabulated for use in evaluating the effectiveness of current policies and practices. The University's continuing testing of 'consumer' response measures the achievement of key objectives (quoted above), notably those directed towards the overall education and development of its students as individuals, as members of the campus and wider communities and as prospective practitioners in their chosen fields and professions.

# UNIVERSITY OF WOLLONGONG

## Organisational Structure



## Academic Structure





# GOVERNMENT OF THE UNIVERSITY

## Principal Officers

### Visitor

His Excellency the Governor of New South Wales

### Chancellor

The Honourable Robert Marsden Hope, AC CMG LLB *Syd*, LLD, QC

### Deputy Chancellor

Brian Somerville Gillett, BA DipEd *Syd*, HonDLitt

### Vice-Chancellor and Principal

Professor Kenneth Richard McKinnon, AUA *Adel*, BA BED *Q'ld*, EdD *Harv*, FACE

### Deputy Vice-Chancellor

Professor Gerard R Sutton, BE MEng Sc NSW, PhD *CUA*

### Pro Vice-Chancellor

Professor J Lauchlan C Chipman, MA LLB *Melb* BPhil DPhil *Oxf*, DipTertiaryEd *NE*

### Vice-Principal (Administration)

Kenneth E Baumber, BSc *St And*

### Vice-Principal (Development)

James W Langridge, BBus *NSWTT*, Dip Tertiary Ed *NE*, MACS

### Dean of Faculty of Arts

Professor James S Hagan, BA DipEd *Syd*, PhD *ANU*

### Dean of Faculty of Commerce

Associate Professor John C Steinke, MA *Calif*

### Dean of Faculty of Education

Professor Russell D Linke, BSc *Flin*, DipEd PhD *Monash*

### Dean of Faculty of Engineering

Professor Tibor G Rozgonyi, DipMaths/Phys *Eger*, DipMiningEng PhD *Miskolc*

### Dean of Health and Behavioural Sciences

Professor Christine E Ewan, MB BS PhD MA *Syd*, FAFPHM

### Dean of Faculty of Informatics

Professor Sidney A Morris, BSc *Qld*, PhD *Flin*, FIMA

### Dean of Faculty of Law

Professor John L Goldring, BA LLB *Syd*, LL.M *Col*, Barrister *NSW*, and Solicitor *ACT and PNG*

### Dean of Faculty of Science

Professor Murray G A Wilson, MA *NZ and Wis*, PhD *Melb*

## Dean of Students

Josephine Castle, BA *Syd*, MA *Warw*

## Dean (Graduate)

Professor William J Lovegrove, BA PhD *Q'ld*, MAPsS

## University Council

### Elected by the Legislative Council

The Honourable Steven Mutch, MLC, MA LLB *NSW*

### Elected by the Legislative Assembly

The Honourable Christopher Downy, MLA, BA DipEd *Syd*

### Ministerial Nominees

Brian Somerville Gillett, BA Dip Ed *Syd*, HonDLitt  
Susan Louise Chapman, Dip Health Admin

*Mitchell*, BA MBA

Roderick John Oxley, BBus AssDip Local Govt  
Admin *Mitchell*, CPA, FAIM

Grahame Morris Parker, BCom *NSW*

### Ex Officio

The Chancellor: The Honourable Robert Marsden Hope, AC CMG LLB *Syd*, LLD, QC

The Vice-Chancellor and Principal: Professor Kenneth Richard McKinnon, AUA *Adel*, BA BED *Q'ld*, EdD *Harv*, FACE

The Chairperson of the Academic Senate:

(1) Professor Helen Gamble, LLB LL.M *ANU* (until July 1992)

(2) Professor Barry Conyngham, MA *Syd*, DMus *Melb* (from July 1992)

### Appointed by Council

Robert Duncan Somervaille, AO, AM, LLB *Syd*

### Elected by the Students of the University

Craig Barratt

### Elected by Convocation

Canon Raymond E Heslehurst, BD *Land*, ThL MTh *Aust Coll Theol*

Shirley Anne Nixon, BA

Associate Professor Robert William Upfold, BE ME PhD *NSW*, ASTC, CEng, MIEAust, MIMechE, AMAusJMM

Dr Winifred Lily Ward, BA PhD

### Elected by the Full-time Academic Staff of the University

Associate Professor Maxwell J Lowrey, ME *NSW*, PhD, ASTC, MIEAust, MACS

Dr John R Panter, BA *Adel*, PhD *NSW*

The University Council at its December 1992 meeting; from left, front row, are Professor Ken McKinnon (Vice-Chancellor and Principal), The Honourable Dr Robert Hope AC CMG QC (Chancellor), Mr Ken Baumber (Vice-Principal, Administration), Dr Brian

Gillett (Deputy Chancellor); back row from left: Professor Gerard Sutton (Deputy Vice-Chancellor), Professor J Lauchlan Chippman (Pro Vice-Chancellor), the Hon. Stephen Mutch MLC, Mr Christopher Downey MLA, Associate Professor Max Lowrey,

Ree, Canon Raymond Haseldurst, Mr Jim Langridge (Vice-Principal, Development), Mr Rod Oxley, Ms Felicity McGregor, Dr Winifred Wind, Professor Barry Conyngham, Mrs Shirley Nixon, Dr John Pantler, Mr Robert Somerville AO AM.

Absent are Mr Craig Barratt, Mrs Susan Chapman, Mr Graham Parker and Associate Professor William Upfold. Professors Sutton and Chippman and Mr Langridge are not members of Council but are invited to attend to provide information in their areas of concern. Mr Baumber is Secretary to the Council.







*Chairperson of the University Senate until July 1992 was Professor Helen Gamble of the Faculty of Law*

### **Elected by the Full-time General Staff of the University**

- (1) Ronald B Parker, BA (until June 1992)
- (2) Felicity McGregor, BA DipLib NSW, AALIA (from June 1992)

### **Academic Senate**

#### **Chairperson of Senate**

Professor Barry Conyngham

Deputy Chairperson of Senate Professor Sidney A Morris

#### **Ex Officio Members**

The Honourable Robert M Hope, Chancellor

Professor Kenneth R McKinnon, Vice-Chancellor and Principal

Professor Gerard R Sutton, Deputy Vice-Chancellor

Professor J Lauchlan C Chipman, Pro Vice-Chancellor

Mr Kenneth E Baumber, Vice-Principal (Administration)

Mr J. P. F. ... University Librarian

... Director, Information Technol-

... Librarian

#### **Faculties**

Professor James S Hagan, Faculty of Arts

Associate Professor John C Steinke, Faculty of Commerce

Professor Russell D Linke, Faculty of Education

Professor Tibor G Rozgonyi, Faculty of Engineering

Professor Christine E Ewan, Faculty of Health and Behavioural Sciences

Professor Sidney A Morris, Faculty of Informatics

Professor John L Goldring, Faculty of Law

Professor Murray G A Wilson, Faculty of Science

#### **Dean of Students**

Ms Josephine Castle

#### **Dean (Graduate)**

Professor William J Lovegrove

#### **Associate Deans**

Dr John Patterson, Faculty of Education

Professor David Farrier, Faculty of Law

#### **Heads of Departments**

Professor Michael J R Gaffikin, Department of Accountancy

Associate Professor Robert J Whelan, Department of Biology

Associate Professor Graham K Winley, Department of Business Systems

Professor Leon A P Kane-Maguire, Department of Chemistry

Professor Raghu N Singh, Department of Civil & Mining Engineering

Professor Fergus O'Brien, Department of Computer Science

Associate Professor Robert G Castle, Department of Economics

Professor Christopher D Cook, Department of Electrical & Computer Engineering

Associate Professor James M Wieland, Department of English

Associate Professor Edward A Bryant, Department of Geography

Associate Professor Anthony J Wright, Department of Geology

Professor Edward J Wolfers, Department of History and Politics

Dr Peter Milburn, Department of Human Movement Science

Professor Gill Palmer, Department of Management

Associate Professor Noel F Kennon, Department of Materials Engineering

Professor David A Griffiths, Department of Mathematics

Dr G John Montagner, Acting, Department of Mechanical Engineering

Professor B Moloney, Department of Modern Languages

Professor Carol Morse, Department of Nursing

Robert Dunn, Department of Philosophy

Professor Peter Fisher, Department of Physics

Professor William J Lovegrove, Department of Psychology

Professor G Dennis Calvert, Department of Public Health and Nutrition  
Professor James E Falk, Department of Science and Technology Studies  
Professor John Bern, Department of Sociology

### **Heads Of Schools**

Professor Barry Conyngham, School of Creative Arts  
Professor Ken Gannicott, Graduate School of Education  
Professor Philip Barter, Graduate School of Health and Medical Sciences  
Professor Clement Lloyd, Graduate School of Journalism

### **Heads Of Centres**

Professor Stephen Castles, Centre for Multicultural Studies  
Professor Ron Johnston, Centre for Technology and Social Change  
Professor Stephen C Hill, Centre for Research Policy

### **Professors**

Professor Gary J Anido, Department of Electrical and Computer Engineering  
Professor Guenter Arndt, Department of Mechanical Engineering  
Professor Peter C Arnold, Department of Mechanical Engineering  
Professor John B Bremner, Department of Chemistry  
Professor Philip Broadbridge, Department of Mathematics  
Professor Druce P Dunne, Department of Materials Engineering  
Professor Carla Fasano, Faculty of Education  
Professor Gerald A Freed, Department of Management  
Professor Helen Gamble, Faculty of Law  
Professor David Greatorex, Department of Management  
Professor James M Hill, Department of Mathematics  
Professor Michael Hough, Department of Management  
Professor Dudley A Jackson, Department of Economics  
Professor Don E Lewis, Department of Economics  
Professor John Morrison, Environmental Science  
Professor Lewis C Schmidt, Department of Civil and Mining Engineering  
Professor Jennifer R Seberry, Department of Computer Science  
Professor Nicholas Standish, Department of Materials Engineering  
Professor B Martin Tsamenyi, Faculty of Law  
Professor Gordon G Wallace, Department of Chemistry



*Chairperson of the Senate from July 1992 was Professor Barry Conyngham, Head of the School of Creative Arts*

### **Elected Members**

*Academic Staff Elected by and from the Members of Each Faculty*

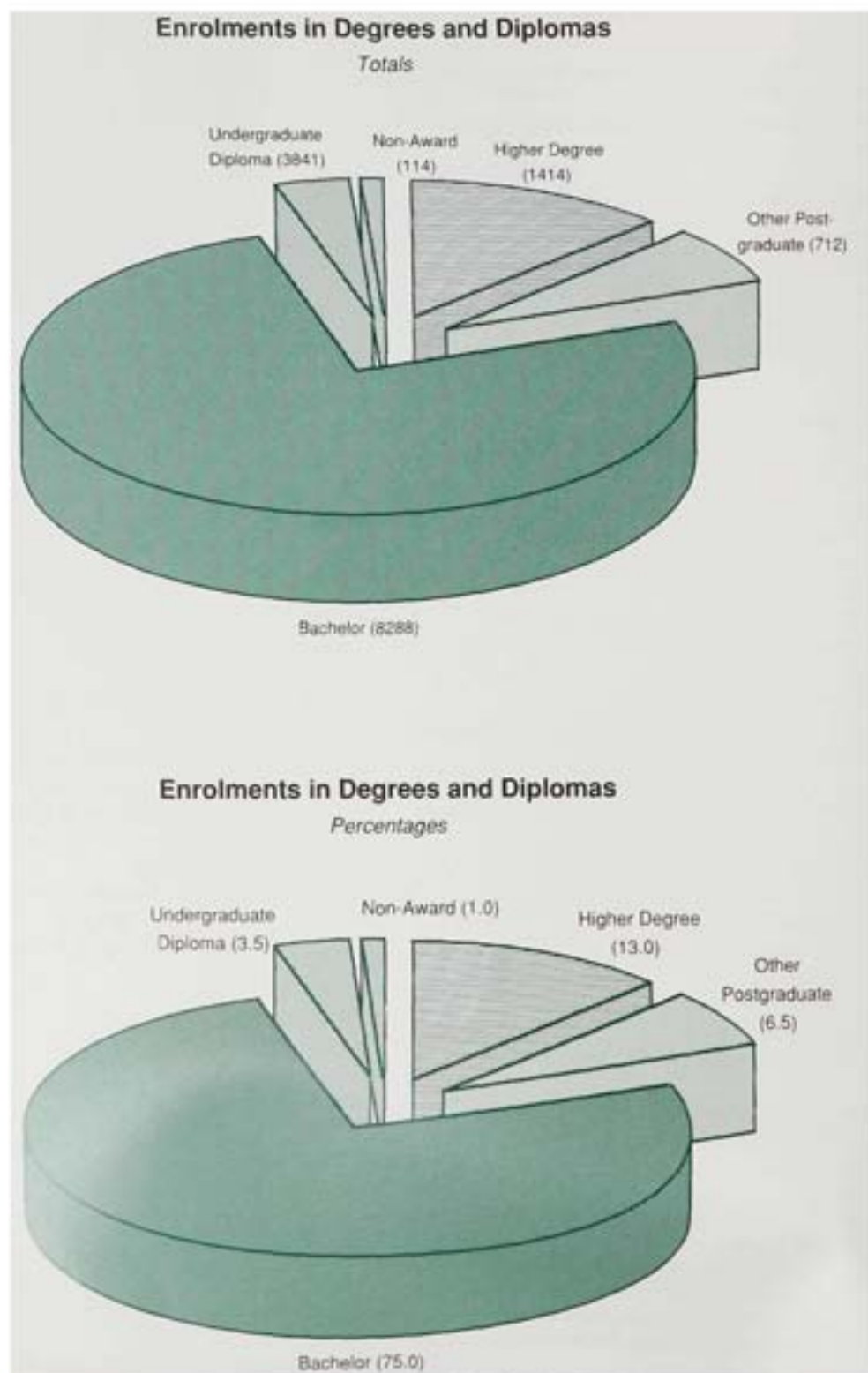
Associate Professor Evelleen Richards (Faculty of Arts)  
Dr Tsilia Romm (Faculty of Commerce)  
Ms Beverley Derewianka (Faculty of Education)  
Dr Tara Chandra (Faculty of Engineering)  
Dr Beverley M Walker (Faculty of Health and Behavioural Sciences)  
Dr Grahame Morris (Faculty of Informatics)  
Ms Jane Innes (Faculty of Law)  
Dr Margaret Sheil (Faculty of Science)

#### *Student Members*

Mr Terry Foye  
Mr Adam Kirkpatrick  
JMs Lylea McMahon  
Mr Joel R Thambipillai  
Mr Craig Wallace

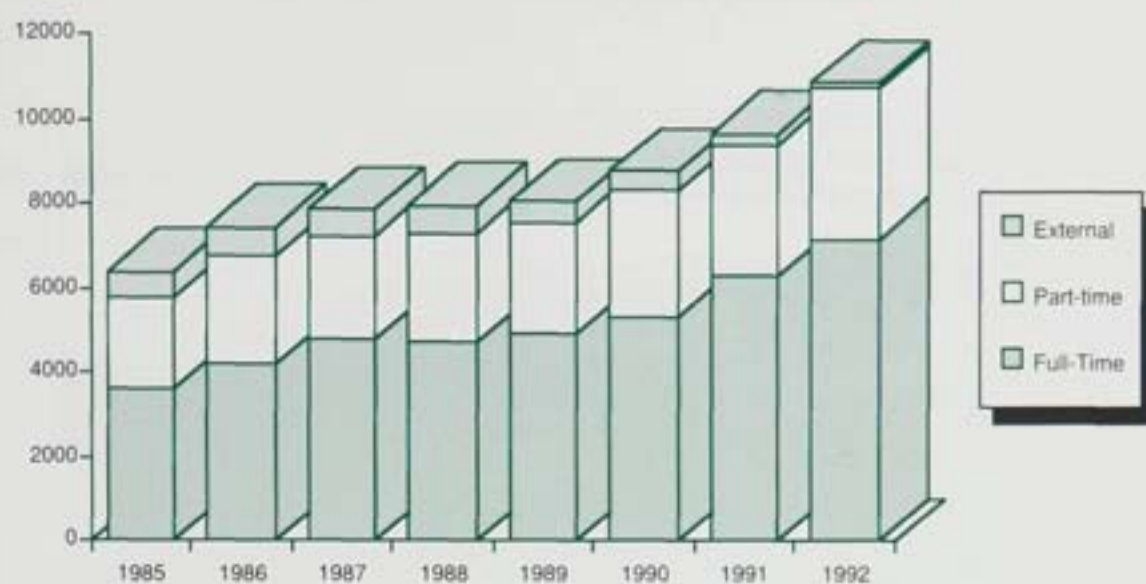
1992

## STAFF AND STUDENT STATISTICS

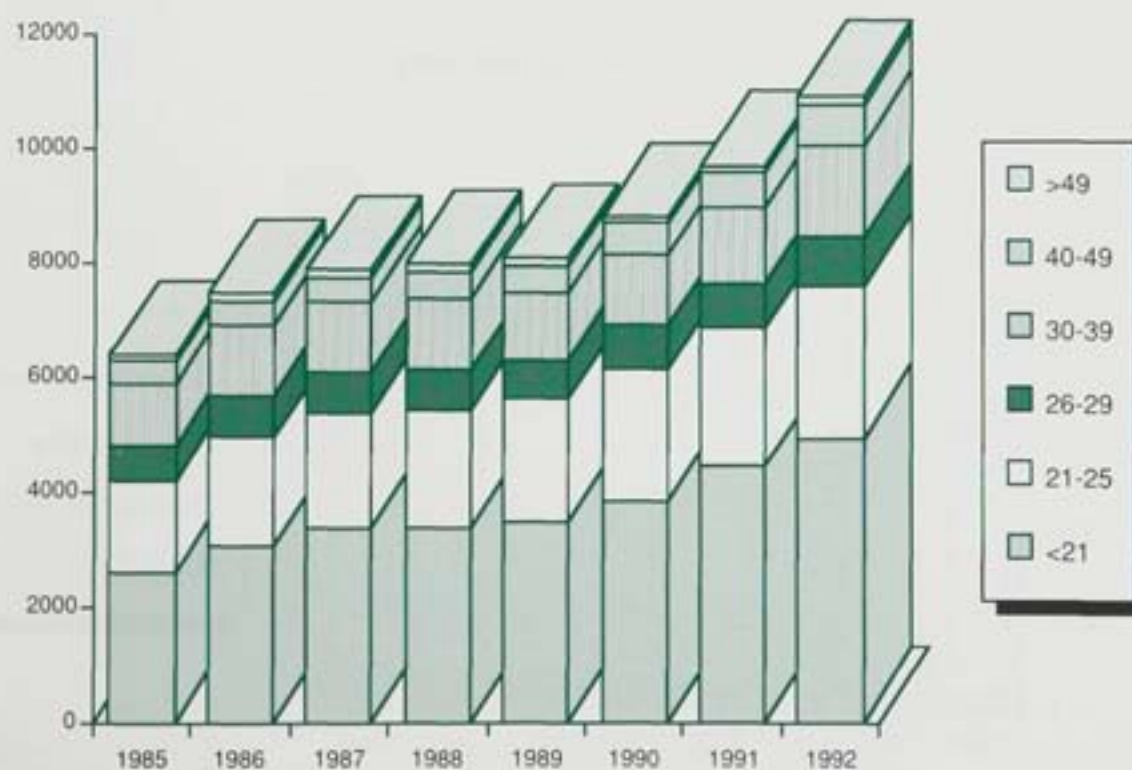




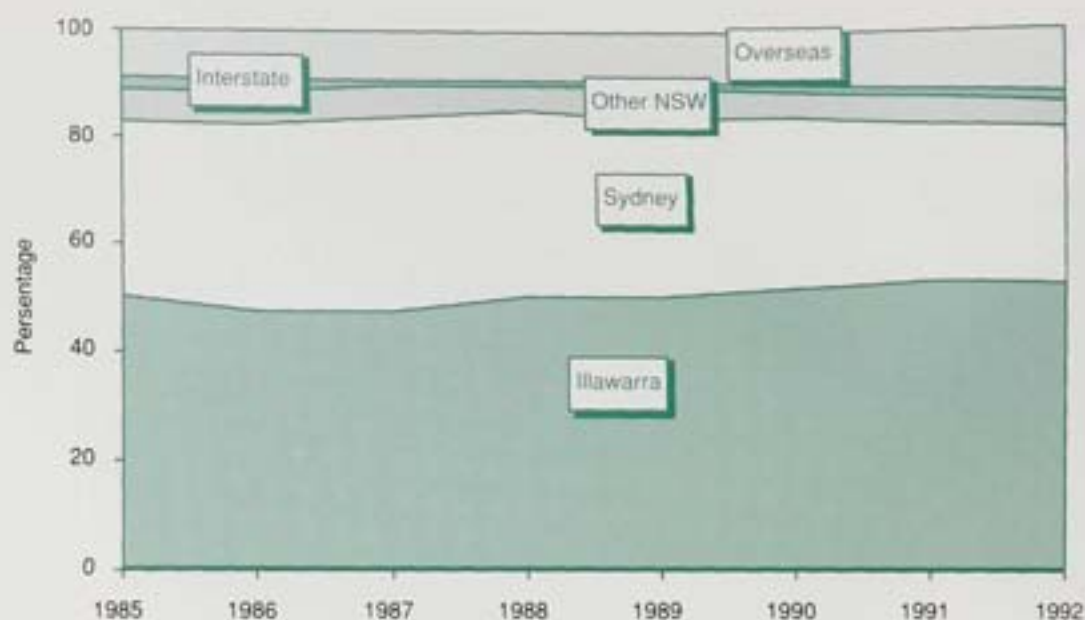
### Growth in Student Population 1985 – 1992



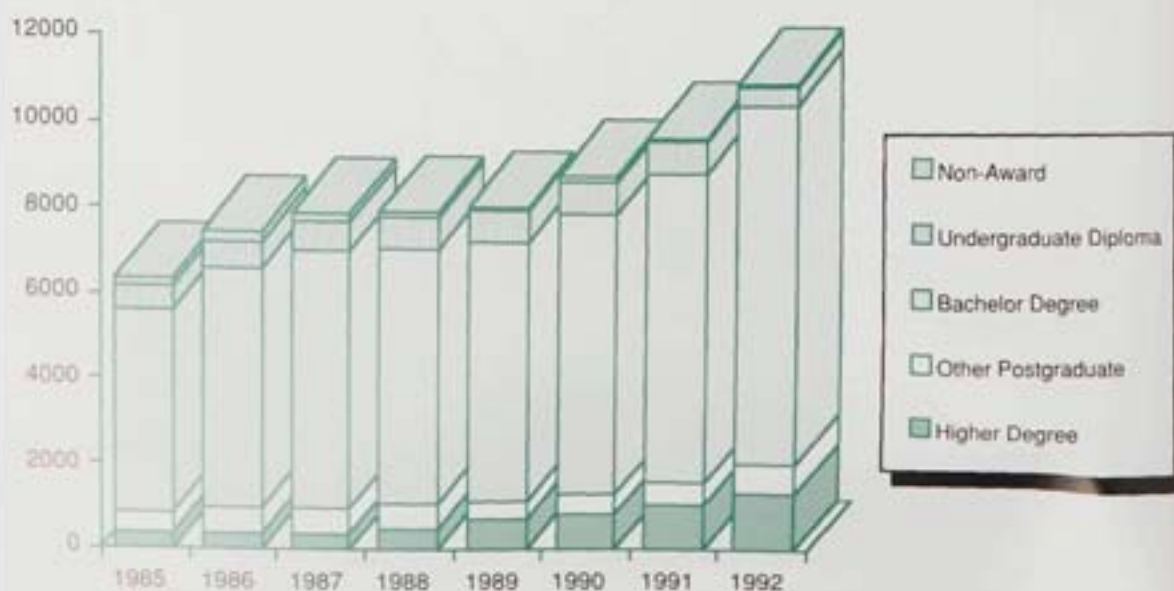
### Enrolment by Age 1985 – 1992



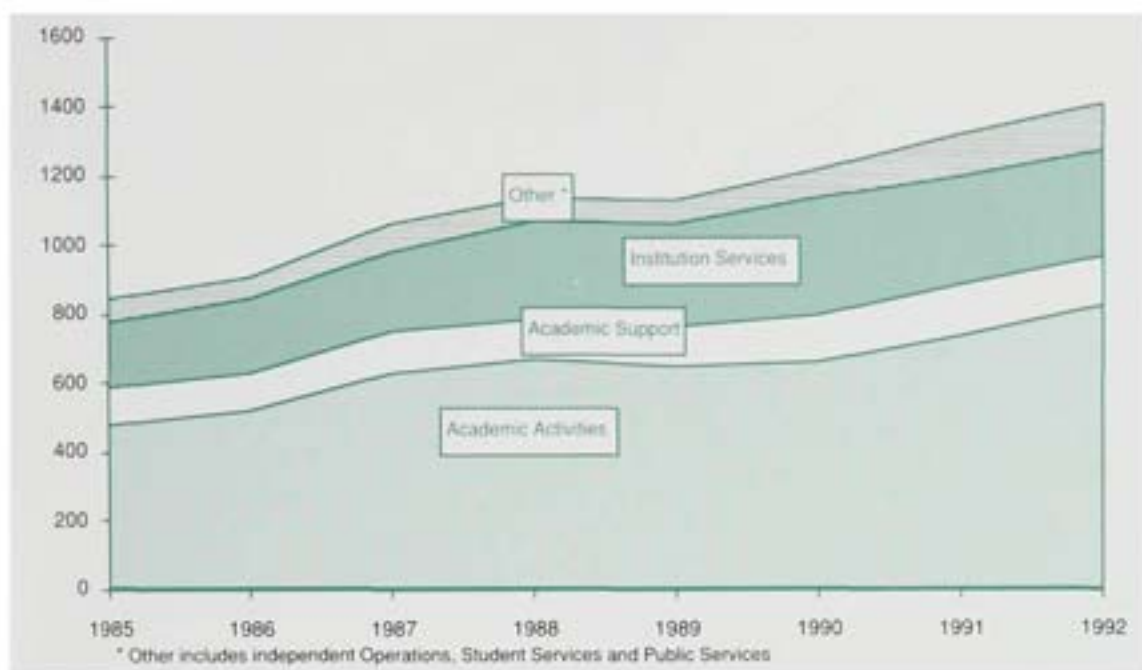
### Proportional Enrolments by Region 1985-1992



### Enrolment Summary 1985-1992



## Full-time and Fractional Full-time Staff 1985–1992



# NEW YEAR IN '92

## SUMMER SESSION

THE YEAR BEGAN WELL for Associate Professor Martin Bunder, who was appointed Chair of the Association of Symbolic Logic's Committee on Logic in Australasia. The Association, which is international, promotes research among mathematicians, computer scientists and philosophers.

NEW FACE ON CAMPUS in February was that of Carol Morse (picture over-leaf), who came to Wollongong as Head of the Department of Nursing. Before her arrival she had been Senior Research Fellow in the Key Centre for Women's Health in Society at the University of Melbourne.

ANOTHER was Dr Sharon Beder, appointed a lecturer in the Department of Science and Technology Studies in the Faculty of Arts. Dr Beder has a civil-engineering background, with a MSc Soc (Science and Society) and a PhD in Science and Technology Studies, both from the University of New South Wales.

AND JOHN BERN moved to Wollongong from Newcastle to take up his position as Professor and Head of the Department of Sociology. His main research areas are in sociology and social anthropology; in the past 20 years he has carried out field work among Aboriginal people in the Northern Territory.



# REVIEW



Professor Fred Hollows, the famous eye surgeon who died at the age of 63, was perhaps the University's most distinguished visitor for 1992. At a function to commemorate the establishment of the University of Wollongong as a college of the University of New South Wales in 1961, Professor Hollows gave an address entitled 'An Australian and Wollongong contribution to equality in eye care between rich and poor nation'. An earthy yet humanitarian New-Zealand-born Australian, Fred Hollows established a world-wide reputation for his work restoring sight to Aborigines in this country, and to the people of Eritrea, Nepal, Mexico, Burma and Vietnam.



*New Head of the Department of Nursing, Professor Carol Morse was formerly a Senior Research Fellow at the University of Melbourne*

*...and Professor and Head of the Department of Sociology, John Bern moved to Wollongong from the University of Newcastle*



**YET ANOTHER** was Adele Walker, Academic Liaison Officer for the Union Bookshop. With an Honours degree in French from the University of St Andrews, Adele was taking on a new role for the University: that of adviser on textbook, academic reference, children's and computer books and looking after special reading requirements.

**STAFF AND STUDENTS** from the Information and Technology and Communication (ITAC) unit joined over 1000 delegates from 37 countries to the Pacific Telecommunications Conference held in Hawaii in January.

#### AUTUMN SESSION

**AT HIS ANNUAL WELCOME** to new students, the Vice-Chancellor and Principal, Professor Ken McKinnon, confirmed the University's decision to remain in the middle size, with slower growth in student numbers to the year 2000. He said that the chief aims were for its students to be of high repute in the international scene, to be of world quality in selected research and post-graduate areas, to be respected for the high quality of its postgraduate professional training courses and to be noted for staff contribution to cultural and public discourse. The University, he noted, now had as many as 54 nationalities represented on campus.

**THE YEAR BEGAN** with the temporary loss to the University of one of its finest scholars: Professor Ron King was appointed Counsellor assisting the Higher Education Council, one of the four constituent councils of the National Board of Employment, Education and Training (NBEET). The appointment is for two years. It will be recalled that Chair of the Higher Education Council is Professor Ian Chubb, a former

Wollongong University Deputy Vice-Chancellor.

**A FURTHER** University appointment was that of the Vice-Chancellor, Professor Ken McKinnon – *quit* President of the Australian Vice-Chancellors' Committee – to the Prime Minister's Science Council.

**AUSTRALIAN LAW BOOKS**, over 700 of them donated by the Faculty of Law, were taken to the University of Ghana – the first consignment transported by Minproc Engineers for the Ghana Educational Assistance Forum. The Forum was established in Canberra in 1991 to collect Australian material to promote cultural and educational exchange between Australia and Ghana and, of course, to improve the teaching of law.

**MORE THAN 250 SCIENTISTS** from around the world gathered at the end of March for the first time – at Oiso, Japan – for lectures by (among others) Professor Gordon Wallace, Director of the Intelligent Polymer Research Laboratory in the University of Wollongong. Professor Wallace described his research into the development of a generic system based on conducting electro-active polymers for industrial, environmental and biomedical applications. Invited also to deliver the closing address, he emphasised the need for international, interdisciplinary forums and other communication mechanisms with which to accelerate the development of the new era in advanced materials.

**A NEW DEAN OF STUDENTS** was appointed in April. In the wake of Professor Murray Wilson's resignation from the post (he had been founding Dean in 1986), the position was filled by Josie Castle, former senior lecturer in the Department of History and Politics. She is also the author of an illustrated history of the University, 1951–1991.



WITH A DISPLAY of exceptional social awareness, the Student Representative Council introduced a free employment service for employers and students. The council began soliciting local firms to look at the University as an effective alternative to the CES and other recruiting outlets. The computerised database was designed and coded by the employment administrator, Rick Threlfo.

THE THERMOLUMINESCENCE dating laboratory in the Department of Geography recorded what is believed to be another 'first' when it measured the age of a sedimentary sample as being in excess of a million years. Deposited over 1.08 million years ago, the sample forms part of a project being undertaken by the Malaysia Geographical Survey and the University's Quaternary Environmental Change Program research group.

A HEALTH CENTRE to provide for the development of an improvement in health care, to be based in the University's Faculty of Health and Behavioural Sciences, was announced in April. The announcement was made by Mr Brian Howe, Deputy Prime Minister and Minister for Health and Community Services. Designated a National Centre for Continuing Education in Primary Health Care, the project would attract an initial funding of \$350,000 over five years, and would involve in addition to the University, the Illawarra and Western Sydney Area Health Services, the National Better Health Program, Healthy Cities Projects in the Illawarra and Canberra, and the University of New South Wales' School of Community Medicine.

PRIVATE ENTERPRISE SEMINARS hosted by the University in early April brought 20 senior executives from the Commonwealth of Independent States to Wollongong. Nominated by the Russian Ministry of Geology, those taking part represented a range of

business interests, among them banking, mining, the stock exchange, foreign trade, mineral research and steel processing. The initiative was to be the first of similar programs planned by the University for 1992 and 1993.

AWARDS FOR 25 YEARS' SERVICE in the University were announced in May. Recipients were Professor James Hagan, Associate Professor Desmond Clarke, Mr John Chapple and Ms Mary Tow. This brings to 28 the number of those with a score of a quarter of a century.

THE RECREATION AND SPORTS CENTRE awards for sporting excellence went to Anthony McGuire (cricket) and Peter Huck (hockey) as joint Sportsperson of the Year; Dr Paul Webb (rugby union), Club Person of the Year; Barry Reid (Cricket), Club of the Year; and Jodie Maguire, who won a colour for touch.

THE INSTALLATION IN MAY of a 20-place computer language course in Japanese put the University on its way to becoming a leading tertiary institution in computer-assisted language



*Mr Brian Howe, Deputy Prime Minister and Minister for Health, Housing and Community Services, on April 6 announces the new health centre*

*High-tech computer lab for Modern Languages: here Japanese language students sample the facilities with Mr Yoshihama, Japanese Language lecturer sponsored by Kawasaki city*





*Irene Stein: a lecturer in the Department of Nursing. Ms Stein has developed a program which enhances her students' education and which, moreover, reaches out to the community in a practical and caring way. She is also co-ordinator of the Department's Gerontology Program*

learning in Australia. The move was the result of support for the Department of Modern Languages from the Commemorative Association for the Japan World Exposition, which was established in 1970 after the Osaka World Fair. The lab was opened on May 1 by Mr Masaaki Noguchi, Consul-General for Japan.

**THE ETHEL HAYTON TROPHY**, awarded to the member of the academic staff who, during the previous year, made '...a notable contribution to an activity which enhanced community support for the University', this year went to Irene Stein. A lecturer in the Department of Nursing, Ms Stein has developed a program of nursing which not only enhances her students' education but also reaches out to the community in a practical and caring way. She is also the co-ordinator of the Department's Gerontology Program.

**WINNERS OF THE VICE-CHANCELLOR'S AWARDS** for high-quality teaching performance in 1992 were Dr Michael Boyd, Senior Lecturer in Civil and Mining Engineering; Mr John Scott, Lecturer in Writing, School of Creative Arts; Ms Roslyn Westbrook, Lecturer in Physical and Health Education; and Associate Professor Robert Wheway, Department of Mechanical Engineering. The award carries a prize of \$2000 and

*At the Department of Geology's prize night in April, with Associate Professor Tony Wright (left) are M M Faiz, Andrew Reid, Maxine Matatko, Kim Straub, Kristen Davey, Russell Chown, J Amanda Jones, Dr Ian Williams and Troy Gill*



*Winner of a Vice-Chancellor's Outstanding Service Award, Ms Rosemary Cooper at the ceremony with the Chancellor, The Hon R M Hope*

only four are made each year. This year 13 nominations were received.

**PROFESSOR STEPHEN HILL** Director of the Centre for Research Policy in the University, addressed the House of Representatives Committee for Long-term Strategies in Canberra on May 5. His theme was 'Creativity and Capture: the Social Architecture of Technological Innovation in Australia' and ranged across such topics as the consequences of the freezing, 100 years ago, of Australia's non-industrial stance, the need to recognise the changed rules for technological innovation, and the building of long-term relationships with Asia.

**VICE-CHANCELLOR'S AWARDS** for outstanding service were presented to Ross Walker, Personnel Officer in the Personnel Services Branch; David Price, Professional Officer in the Department of Geography, for his role in establishing the Thermoluminescence Dating Laboratory; to Ellen Peascod, a part-time Administrative Assistant, for planning and implementing changes which resulted in significant financial savings in Summer Session enrolment procedures; to Annette Meldrum, General Library Assistant in Information, for the development of a 'Loans Training Package'; to Rosemary Cooper, Professional Officer in the Faculty of Commerce, for the efficient provision of financial and statistical information to the Dean and Department Heads.



THE UNIVERSITY CENTRE – a joint venture located in Sydney – involving Charles Sturt University and the Universities of New England and Wollongong, was opened towards the end of April. The aim of the venture is to provide the highest-quality promotional, administrative, conference and meeting facilities in the Central Business District for staff and students of all three universities. The centre is located in Clarence Street, near the Queen Victoria Building.

THE LANGUAGE, Literacy and Learning Unit, after its success in marketing – through the Illawarra Technology Corporation – a literacy education program for teachers in the USA, introduced the program to NSW in March. Since then there has been interest from the USA, New Zealand and from other countries in the Pacific region. Designated Frameworks, the program was developed by Associate Professor Brian Cambourne and Jan Turbill.

IN 1992 Frameworks was confidently predicted to revenue \$US700,000, and to be employing four full-time and several part-time staff. Frameworks was introduced to the Australian education market in October.

## SPRING SESSION

NEW TECHNOLOGY in the University Printery – a Sakurai colour press – was unveiled on August 26 with a full-colour issue of *Campus News* announcing details of Open Day.

ALSO ON AUGUST 26, the University was host to Professor Donald Horne, who gave a lively address entitled 'Freedom and independence for the golden lands of Australia: the coming Australian republic'. During his visit Professor Horne also launched two books: *Australia's Italians* and the Italian

translation, *Italo-Australian*. The books were edited by Stephen Castles of the Centre for Multicultural Studies, Gaetano Rando of Modern Languages, Ellie Vasta of Sociology and Caroline Alcorso, now a freelance researcher.

DESIGNATED THE OLDEST MAN, an unusual, primitive and yet starkly modern sculpture by Adrian Mauriks was acquired by the University in September. It has been located outside the Hope Theatre.

AN AWARD-WINNING biologist, Dr Mark Baker, joined the University in September. He was awarded two international Young Investigative prizes (in 1988 and 1990) for his work in free-radical cartilage injury from arthritis, and in 1991 he took the Howard Florey Award for outstanding achievement by a young Australian scientist (the award takes its name from the famous Australian Nobel-Prize-winning medical researcher). His research has dealt mainly with the mechanism of malignant cancer spread through the body and the prevention of that spread into normally healthy tissue.

A BACK-TO-THE-BLACKBOARD experiment in the Faculty of Informatics proved both popular and successful with staff and students. Desks and chairs were taken away and the walls of tutorial rooms lined with blackboards in what looks like becoming a new-style room for mathematics students. The arrangement ends the unhappy custom of students crouching over their papers, 'pretending' to be working on a question when in fact they are stumped and too shy to ask for help. With the new system tutors can see at once who is having trouble – and who is ready for additional work.

COMMENDATIONS for safety awareness were awarded to the



Dr Mark Baker: winner of the Howard Florey Award for outstanding achievement by a young Australian scientist. His research has been mainly in the area of the spread of malignant cancer

...and Co-ordinator of the Postgraduate Program in Health Policy Management in the University. Ms Mary Harris was elected Chairperson of the reconstituted Society of Health Administration Programs in Education (SHAPE)



During the October graduation ceremonies for Arts, Commerce and Law, the Occasional Address was given by Mr Moosa Baqer, President and Chief Executive Officer of Best Enterprises (a computer-based solutions concern). He is also a former Director-General of Industry and Commerce in Oman. With him here are Ms Sue Walker and Mrs June Hope



Maintenance Workshop, the Printery and the Department of Biology in August for their achievement of a high level of safety awareness and demonstrating a keen interest in attention to safety issues on campus. The certificates were awarded by Dr Pat Copping, Director of the National Safety Council. Accepting the awards on behalf of their departments or units were Lionel Ransley (Printery), Tony Hulbert (Biology) and Eric Young (Maintenance Workshop).

THE OCTOBER GRADUATION ceremonies saw 520 students from eight faculties receive their testamurs from the University Chancellor, Dr R M Hope. In addition, Roger Woodward, pianist virtuoso, was awarded an Honorary doctorate in recognition of his outstanding creative contribution to the arts in Australia and for the active encouragement he has given to other artists. The Occasional Addresses were given by Mr Harry Wragge, Telecom Director of Research, and Mr Moosa Baqer, President and Chief Executive Officer of Best Enterprises – a computer-

based solutions company – and a former Director-General of Industry and Commerce in Oman.

DR JOAN COOPER became Associate Professor and Head of the Information Technology and Communication Unit in October. (Her PhD was undertaken under the supervision of Professor Jennifer Seberry.) Her 18 years experience in Information Technology includes four years as Head of the Department of Management at the University of Newcastle; she was a Reader in the Information Systems Department at the ANU; and she was involved in the establishment of the Bachelor of Information Science at Newcastle and the Bachelor of Information Science at the ANU.

GUEST SPEAKER at the 14th Sir Richard Kirby Lecture on October 19 was Jennie George, Assistant Secretary of the ATCU, who took as her theme 'Managed Decentralisation and Deregulation: the Key Issue in Industrial Relations'.



THE OCCASION was marked also by the awarding of Industrial Relations prizes to: Ron Johnson – Eric Derra Young Scholarship, for the most outstanding undergraduate record for a currently enrolled Honours student; Susan Sainty and Nichole Davidson: Hilda Kirby Prize for the most outstanding essay by a student in introductory industrial relations on the theme of the previous year's lecture; and Yasmin Rittau: Industrial Relations Society of NSW Prize for the most outstanding record in introductory industrial relations at the University of Wollongong in 1991. (Ms Rittau won the Hilda Kirby Prize in 1991.)

AFTER the lecture Jennie George launched *Employment Relations: Industrial Relations and Human Resource Management in Australia*, a book by Margaret Gardner (QUT) and Gill Palmer.

THE AUSTRALIAN Research Council (ARC) in announcing its funding for 1993 awarded the University \$1,152,400. This was composed of 11 initial and 17 renewals.

EXPERIENCE of Immigrant Workers at Port Kembla's BHP steelworks from 1981 to 1989 was the focus of a report prepared for the Bureau of Immigration Research by the University's Centre for Multicultural Studies. Entitled *Immigration and Industry Restructuring in the Illawarra*, the report – which called for a central body to be established, charged with ensuring immigrant workers' special needs were catered for and appropriate social welfare measures taken – was given widespread airing in the electronic media and in newspapers. It was prepared by Michael Morrissey, Maureen Dibden, Colleen Mitchell, with Robert Castle, Ray Markey and David Baume.

A NEW training program developed within the Faculty of Engineering by the Department of Mechanical Engineering, was launched in Sydney in

September by CityRail. The subjects have been tailored to meet the needs of CityRail from the University's innovative Postgraduate Diploma in Engineering (Maintenance Management) program. University staff will deliver the course on site, in Sydney. The course is being managed by the Illawarra Technology Corporation (ITC).

DAVID MADEDDU, Co-ordinator of the AIDS Council of the Illawarra, was presented with a cheque for \$3000, raised by the Students Representative Council and its Flame Tree Fashion Awards. The cheque would be used to provide funds for equipment for the AIDS Council's Day Care Centre.

THE CREATIVE DESIGN Competition – 22nd in the highly competitive series organised by the Department of Mechanical Engineering in conjunction with the Sheet and Coil Division of BHP Steel – saw four out of five prizes go to a group whose design was a cladding clamp, a device for handling corrugated sheet. The winning group comprised John Gorman, Tom Carter, Michael Wyatt and Greg Baldock. Fourteen design groups from first-year Mechanical Engineering students worked on their designs throughout the Spring Session. The awards were presented on November 27.

#### SUMMER SESSION

STUDENTS undertaking summer courses – inaugurated in 1982 to maximise the use of the University's facilities and resources and to provide the opportunity for students to 'fast-track' degrees – were welcomed by the Vice-Chancellor on December 7: 1,700 enrolled as compared with 1400 for the previous year. Students from other universities are welcome to the session and may apply to their own universities to have Wollongong Summer Session courses credited towards their degrees.



*Immigration and Industry Restructuring in the Illawarra: the report was released by Professor Stephen Castles, Director of the Centre for Multicultural Studies, and M Michael Morrissey*

## Reports from Faculties

# Academic Activities

### Faculty of Arts



*Sue Rowley, from the School of Creative Arts, took up an appointment to the Projects and National Infrastructure Committee of the Visual Arts/Crafts Board of the Australia Council; she has also been elected Vice President of the Board of Crafts Council of NSW*

SEVERAL initiatives planned in 1991 began to operate successfully in 1992. The Department of Philosophy offered its new post-graduate course in Applied Ethics in combination with other Departments from outside the Faculty. Within the Faculty, the Departments of English and Sociology combined to offer the first year of Communication Studies. The heavy over-enrolment in these subjects points to a strong and growing demand; the Faculty will keep the course under review through a small Board of Studies.

Students also over-enrolled in the first-

year Japanese subjects. The Japanese program completed its second year and, in Summer session, the first group of students undertook studies in Kawasaki as part of their course. Kawasaki City Council financially supported a Senior Fellow to teach Japanese for a year at Wollongong, and also sent a troupe of dancers and musicians who performed for one memorable night at the Hope Theatre. The Faculty acknowledges the generosity of the Kawasaki City Council, and also of the Japan Foundation, which has contributed towards salary maintenance.

The Faculty has assumed principal



*School of Creative Arts in production for 'Steel Magnolias'*

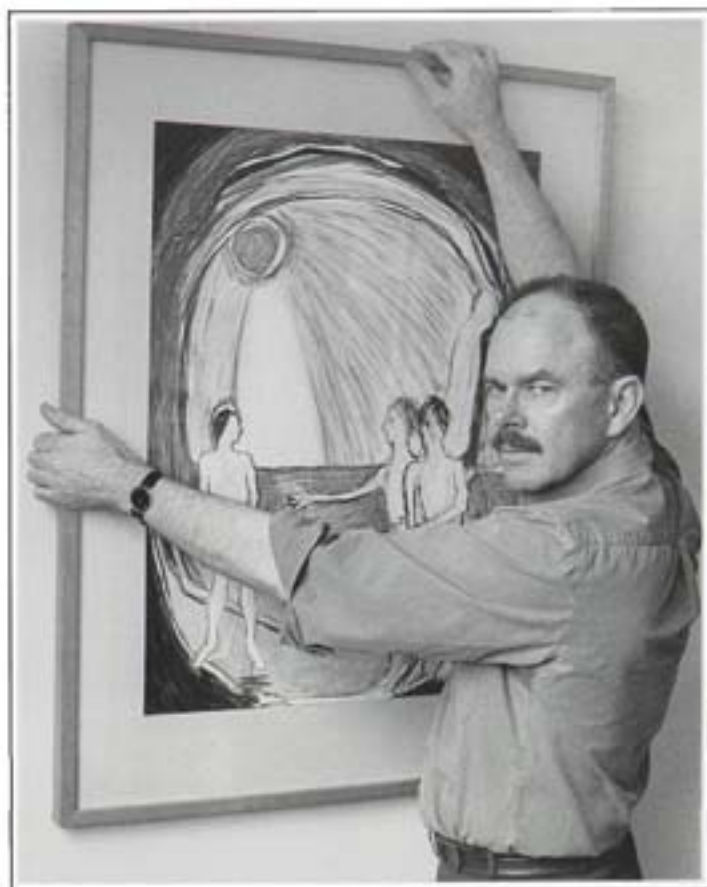


responsibility for the offering of subjects and courses at the Shoalhaven Campus near Berry. It will provide first-year students with a choice of Australian History, Politics, Sociology and English. Departments have appointed full-time experienced lecturers to co-ordinate all these subjects.

During the year, the Faculty strengthened its ties with the wider community by establishing a Visiting Committee. The Committee has ten members who have an interest in the teaching and research of Arts subjects, and their promotion outside the University. It met twice in 1992, and the Faculty is already grateful for its advice and help. Internally, the Faculty paralleled the establishment of the Visiting Committee by electing a Planning Committee to offer advice to the Executive and the Dean. Special electoral provisions have ensured the membership of a number of junior members of staff who normally would not be able to participate in Faculty governance.

In research, the Faculty became involved in two notable programs funded by the Department of Employment, Education and Training. The first of these investigates the application of computer-aided techniques to teaching and learning in the Humanities, and specifically in History. Two members of the staff of History and Politics are working with staff from the Illawarra Technology Centre on this project.

The second project is a pilot program



*Associate Professor Peter Shepherd mounts one of his works*

for the retraining of teachers of Australian history. The Faculty is co-operating with the Faculty of Education to produce a course of four subjects leading to the award of a postgraduate Certificate in History Education, which itself will stand as half credit towards a Master of Arts or Master of Education degree.



*At the opening of the Computer Laboratory in the Department of Modern Languages are Mr Masaya Usuda, Director of the Japan Foundation Sydney Language Centre, Professor Brian Moloney, Head of the Department of Modern Languages, and Mr Masaaki Noguchi, Consul General for Japan*

## Faculty of Commerce



*Management's new Professor, Gill Palmer, as one of her first tasks at Wollongong carried out a review of the Master of Business Administration degree*

**T**HE YEAR saw the Faculty move into several exciting new areas. A Visiting Committee was established with the brief of enhancing the reputation of the Faculty, advising on desirable developments and improvements, widening the Faculty's links with industry and business, and associated activities. The Faculty was privileged to secure the services of a distinguished panel from a variety of backgrounds, thus ensuring the quality and diversity of consultation.

The Visiting Committee met three times and implementation of suggestions made in the course of these wide-ranging discussions is already under way. The Visiting Committee is chaired by Emeritus Professor Raymond Chambers, a renowned international scholar and accountant.

Another initiative was the formation of a Faculty Alumni Association, which promises to be one of the most successful chapters in the University. The inaugural function, organised by the Faculty Office in conjunction with the Alumni Office, was held mid year in the attractive new Union extension. About 140 people enjoyed a pleasant evening of renewing old friendships and admiring the progress of their Faculty. Subsequent meetings were less social, concentrating on structuring a Board and appropriate guidelines. The function of the Alumni Association is seen as pivotal to the future growth of the Faculty.

The Graduate School of Business, formed last year and headed by Professor Don Lewis, consolidated its operation in 1992. One priority was to undertake a review of all the Faculty's postgraduate programs. Another was to set in place an orientation program for all postgraduate students commencing in 1993, similar to those available for undergraduate students, but with a

specific focus on higher degree study. Orientation programs for postgraduates had been successfully trialled by the Department of Accountancy last year and again in 1992. The Graduate School of Business was also instrumental in the Faculty receiving a higher level of research funding than previously.

The Department of Accountancy saw the fruits of its increased research efforts over the last two years with several members presenting papers at significant international conferences. Venues included Spain, Britain, Japan, Taiwan, India, New Zealand, Canada and even Australia, and while the papers presented the researchers' individual research projects some were concerned with innovations in teaching. The Department continues to work hard to find new and interesting ways to present its materials to the large numbers of students it has to manage and computerising some elements of the teaching has proved to be useful.

The Department of Business Systems hosted the Third Annual Conference in Information Systems, bringing together eminent scholars from the Netherlands, the UK, Denmark, Canada and Argentina. The Department also initiated an independent University-funded research program in Information Systems. Previously such research had been carried out jointly with the Department of Management.

At the end of the year, Associate Professor Graham Winley was appointed to the newly created Chair in Business Systems. Professor Winley had headed this Department as an Associate Professor since its inception in 1989.

Management's new Professor, Gill Palmer, undertook, as one of her first tasks in the Department, a review of the Master of Business Administration degree. In this she was assisted by the





Graduation in October of the first three Doctors of Philosophy in the Department of Management underlined the University's international links. From left are Malaysian corporate consultant Abdullah Haji Almad, Professor Jill Palmer, head of the Department of Management, Ghanaian-born Kwaku Atuahene-Gima, now a lecturer in the Department, Associate Professor John Steinke, Dean of the Faculty of Commerce, Zein Heflin Frinces, Rector of the Universitas Widyua Mataram, in Yogyakarta, and Professor Ken McKinnon, Vice-Chancellor of the University of Wollongong

new MBA Director, John Anderson. Admission guidelines and structure and content were modified somewhat as a result of the review and already enrolments for 1993 have increased considerably. Professor Palmer also launched her latest book *Employment Relations: Industrial Relations and Human Resource Management in Australia*, co-authored by Margaret Gardner. This is the first book of its type, pulling together two different teaching areas. It was launched at the annual Kirby Lecture.

Doctorates in Management were awarded for the first time. The recipients were from three different countries; one is now lecturing with the Department, another is a corporate consultant in Malaysia, and the third is the Rector (equivalent to a Vice-Chancellor) at a University in Indonesia (see photo).

In Economics, a new book has likewise just been published by Associate Professor Amnon Levy. *Economic Dynamics* was typeset within the Department and its standard of presentation is a credit to all concerned. The book is designed for use by postgraduates and as an introductory

work on dynamic modelization for research economists. Associate Professor Ray Markey has obtained a large ARC grant (\$28,000) for his study of the Political Economy of Wage Determination in Australia. His book on the History of the New South Wales Labour Council will be published in the new year. Associate Professor Mochtar Metwally is co-ordinator for a new research group in International Business, which received government funding. Members of the program are drawn from Economics, Accountancy, Business Systems and Management.

A number of women from the Faculty succeeded in winning DEET equity grants, designed to foster the participation of women in research.

Both the Dean and the Executive Officer of the Faculty were active throughout 1992 in exploring new markets and strengthening existing ones for the Faculty's international program. Internationalisation of curriculum and perspective continues to be a priority for the Faculty. This is deemed to be of immediate and long-term benefit to all students, regardless of nationality, and is consistent with the stated objectives of the whole University community.

## Faculty of Education

**D**URING the year the Faculty of Education introduced a range of new undergraduate and postgraduate courses and developed a Doctor of Education course proposal for introduction in 1993.

The Bachelor of Teaching in Early Childhood Education began in 1992 with an enrolment of approximately 25 students. The first year of the course was developed so that it was identical to the first year of the Bachelor of Teaching in Primary Education program with students specialising in the early childhood area in the second and third years of the course.

The Faculty also offered a Graduate Diploma in Adult Education and Training for the first time in 1992 with an enrolment of approximately 20 students from a range of private- and public-sector backgrounds. The Graduate Diploma in Adult Education and Training was developed in response to the increasing demand for staff qualified in the training and education of adults in a broad range of areas including business, industry community education, government and private organisations.

After the success of the Graduate School

of Education's first Postgraduate Colloquium in 1991 a similar event was organised in 1992, and was again well supported by the Faculty's staff and postgraduate students. In addition to presentations from students and staff undertaking postgraduate studies, there were demonstrations of computer software packages, education databases and other relevant technologies. Workshops were also held on research methods and the presentation of material for publication.

In response to the University's decision to establish an Alumni Association as its main vehicle for contact with graduates and former staff members, the Faculty of Education held a reception for graduates and staff members from the Faculty and the former Wollongong Institute of Education and Wollongong Teachers' College; the aim was to establish a faculty-based alumni group and to reunite old friends. Approximately 70 former students and staff members attended the reception which was co-hosted by the Pro Vice-Chancellor and the Dean of the Faculty. A number of those present expressed an interest in becoming members of a Faculty of Education alumni chapter. It is anticipated that the first meeting of the chapter will be held in early 1993.

During the year the Faculty successfully hosted an intensive workshop on Interactive Multimedia which attracted 13 participants from all over Australia and New Zealand. Those taking part spent ten days learning to design and create interactive multimedia projects that could be used in education or training including programming a project for the Cancer Council using Hypercard. The Cancer Council expressed an interest in using multimedia, thus providing an opportunity to produce a prototype which could be used by the Council in promotional and

*Professor Russell Linke, Dean of the Faculty of Education, with Professor Ken Gannicott, Head of the Graduate School of Education.*







educational activities. The prototype is an instructional package for the prevention of cancer and will be used in a variety of settings including schools and the Royal Easter Show.

This was the first time that this type of workshop had been conducted in Australia. It came to fruition because of the technology and expertise that the University, and in particular that which the Faculty of Education, has developed. The workshop proved so successful that another was scheduled for February, 1993.

The Faculty of Education has embarked on a joint project with the Department of School Education in the form of a Regional Research Publication which will be published twice a year with copies being distributed to schools, the University, State Education organisations and other educational institutions. A staff member from the Faculty has been appointed editor of the publication, which will provide a summary of research undertaken as a joint interest/endeavour of the school, region and university communities.

The University has initiated an award scheme to encourage and reward high-quality teaching performance by academic staff of the University.

Introduced in 1991, the awards are highly competitive; two staff members from the Faculty have been successful in their nominations.

The revised Diploma in Teaching (Primary) course, now known as the Bachelor of Teaching in Primary Education, began during the year. Particular emphasis was given to redesigning the course so that it would facilitate the development of reflective professional teachers who were competent to start teaching in schools and have a commitment to their own continuing professional development. The Bachelor of Teaching in Primary Education course places greater emphasis on learner independence and accountability, enquiry and critical reflectivity.

The Faculty has developed a Doctor of Education course proposal that has been approved by the University Senate and will begin in 1993. The purpose of the degree, which combines coursework and thesis, is to prepare professional leaders in Education. It is anticipated that it will attract senior education professionals in the Illawarra, South Coast and South Sydney regions, as well as overseas students who may prefer the North American model of mixed coursework and thesis.

*Courses for academic staff: standing are Lecturer in Adult Education and Training, Dr Max Gillett, and Staff Development Officer (Academic) Liz Ellis, with some of the first group to complete the Introduction to Tertiary Teaching course*

## Faculty of Engineering



*Keynote speaker at the Ground Control in Mining conference held at Wollongong, and hosted jointly by this University, the University of West Virginia and the Australian Institute of Mining and Metallurgy, was Mr William Tattersall, USA Assistant to the Secretary of State for Safety and Health. Over 200 delegates attended. The occasion was the first on which the conference has been held outside the USA.*

*Ms Sandra Leigh, second-year student in Materials Engineering, was awarded the Commonwealth Banking Corporation prize for her achievement in the course*



**T**HE Faculty of Engineering and its associated units found the year highly innovative. Development spread beyond academic and research activities, as building works to extend the Faculty's Department of Civil and Mining Engineering got under way.

Staff members were actively involved in comprehensive review and improvements to engineering courses on offer. These resulted in the formulation of a common core undergraduate engineering curriculum, the Bachelor of Technology program, and educational changes to current postgraduate courses. Other projects undertaken included running the Girls in Engineering Summer School and the accreditation review by the Singapore Board of Engineers of the Faculty's undergraduate courses.

The purpose of the curriculum initiative is to make engineering at this University more responsive and relevant to the changing infrastructure of the Australian and international economies, and to ensure compliance with the Institution of Engineers Australia (IEAust) reformed agenda for engineering education and management. Accordingly, the Faculty introduced a common core curriculum for all its undergraduate courses from 1993. The common core, which is based on the principle that all sub-disciplines of engineering share common principles and processes, will provide a co-ordinated, well structured program whereby all students will benefit from the pooling of academic knowledge and resources within the Faculty.

To ensure that postgraduate courses offered in the future are more applicable and competitive, the Faculty introduced amendments to programs, which reflect a rationalisation of resources and are aimed towards ensuring that postgraduate offerings

reflect the expertise within the engineering departments.

Thanks to the hard work of representatives from the University of Wollongong Faculty of Engineering and Wollongong Institute of Technology (TAFE), especially during 1992, the Faculty of Engineering introduced a simplified articulation path from the Associate Diploma offered by TAFE to bachelor degree in 1993. The path will comprise a Bachelor of Technology course in each of civil engineering, materials engineering and mechanical engineering and extend in 1994 to include environmental and mining engineering. The course is offered over three years of part-time study. Successful completion will qualify a student for admission to the IEAust as an Engineering Technologist. Introduction of the course reflects three decades of close relationship and co-operation between the University, TAFE and industry and the Faculty's determination to offer courses that are applicable in today's society.

In January, the Faculty ran the Girls in Engineering Summer School attended by 74 high-school girls from around NSW. The purpose of the School was to encourage girls to achieve higher-level Mathematics and Science and to foster an interest in women to take up professions such as engineering. The Summer School met its aims and was popular with those who attended - parents, teachers, career advisers and principals of high schools. It also gave rise to keen interest by government departments and other universities, thereby placing the Faculty at the leading edge of gender-based initiatives in engineering. Strong demand for continuation of the program resulted in a second summer school for January 1993 - and possibly beyond.

The Faculty of Engineering was also one of the major co-ordinators for





*The University in April hosted a visit from 20 senior executives from the Commonwealth of Independent States. Visiting BHP here are Mr Mikhail Vladimirovich Tolatchev, Chairman of the State Commission, Ministry of Ecology and Natural Resources of the Russian Federation, Miss Zaruhi Radikova Akopian, Academy of National Economy and Manager of the Program, and Mrs Assiya Belonogova, Commercial Director of the Industrial Geological Association*

three international programs. Together with the Civil and Mining Engineering and Mechanical Engineering Departments, the Faculty successfully bid for 20 Indian mining engineers for retraining in the area of underground coal mining and coal processing. Participants received intensive theoretical information and industrial experience from May 11 until July 3. The project was fully funded by AIDAB.

From April 11 to 29 the Faculty, jointly with the Departments of Business Systems and Management, provided an intensive program and industrial visit for the delegates from CIS countries in the area of mineral engineering and manufacturing. A second group (17 delegates), but more specifically related to petroleum engineering, received technological, business and managerial training along with industrial visits from June 14 to 25. Jointly with industrial partners and the University of New South Wales, the Faculty provided a high-level technical program for delegates.

Individual Departments and Units had

specific successes in 1992. The Department of Civil and Mining Engineering, recognising the need for engineering professionals to help solve pollution problems generated by our built environment, introduced the Bachelor degree course in Environmental Engineering. The course aims to produce graduates capable of providing solutions to current pollution problems and directing society to an environment sustainable in the future. The Department also plans to introduce postgraduate courses in environmental engineering in 1994.

Research activities remained strong with the Departmental staff attracting more than \$1 million in 1992 from outside funding grants. Included in the research grant total, Departmental staff attracted over \$130,000 in Australian Research Council (ARC) grants.

When completed in June 1993, the renovations of buildings, mentioned earlier, will provide additional space for staff and students and improve laboratory and research facilities.

The Key Centre for Mines, University of



Wollongong Division (an associated unit of the Civil and Mining Engineering Department) was active in education, research and consulting services for the minerals industry. The Wollongong division conducted four major accredited short courses relating to postgraduate studies in mining. In addition, the Centre contributed significantly to the running of short courses held at the University of New South Wales, Kensington. Currently the Centre has 56 postgraduate students. During July 1992, it sponsored the 11th International Conference on Ground Control in Mining with Dr N Aziz as convenor. The Centre also supported research activities within the Department of Civil and Mining Engineering by providing grants up to \$20,000 each to a number of its academic staff.

A major development for the Department of Materials Engineering was the establishment, in mid-1992, of a postgraduate teaching program for PT Krakatau Steel at Cilegon West Java, Indonesia. The program started in August and is expected to continue over five years.

An outstanding achievement for the

Departments of Materials and Mechanical Engineering and the Faculty as a whole was the establishment, in mid-1992, of a Co-operative Research Centre (CRC) on Materials Welding and Joining, involving the University of Wollongong as one of the core partners. The Commonwealth Government will provide \$12.42 million over a seven year period to establish the Centre. A primary objective is to enhance the competitiveness of Australia's value-added manufacturing industry through innovation, research and development and training in the welding and joining area. The Centre is binodal (Adelaide and Wollongong) and will harness the resources of the core partners ANSTO, BHP, CSIRO, the Universities of Adelaide and Wollongong and the Welding Institute of Australia (WTIA).

The Director is Dr Norman Eaton, President of the International Institute of Welding (IIW). He has a distinguished international reputation in institutional, industrial, educational and R & D aspects of welding and joining. Dr Eaton arrived in Wollongong on 14 November. The Deputy Director, Mr Ian Henderson, is located in Adelaide at CSIRO-DMT.

*During the year, mining engineers from India visited the Faculty for retraining in underground coal mining and coal processing*



The University, mainly through the Faculty of Engineering, is obliged to contribute a substantial in-kind to the CRC, in terms of academic staff time and equipment. In return, the CRC is expected to provide research funding through research students, post-doctoral fellows, and the provision of specialist equipment and general research costs. The educational program also provides a means for developing the postgraduate course offerings of the Faculty.

The Department of Mechanical Engineering undertook extensive revision of its existing undergraduate courses which will result in a full common core curriculum in 1993. A Maintenance Management training program was initiated for CityRail, which utilises Total Quality Management (TQM) principles in the work place. The Department also co-ordinated and contributed to the delivery of postgraduate full-fee-paying TQM courses in the University Centre, Sydney, and at industrial locations including State Rail Authority Workshop. On September 2, a joint training program on Maintenance Management was officially entered into between CityRail and the University of Wollongong. The Department of Mechanical Engineering is also taking a new approach in the management of its activities and administration through the implementation of TQM principles. The Department implemented TQM meetings for its staff, piloted a customer-satisfaction evaluation and formulated a Quality Policy Statement. The Department also applied for a Challenge Grant to aid in obtaining accreditation of its TQM to meet Australian standards.

Representatives from the University, including the Department of Mechanical Engineering in conjunction with industry, other Australian universities and the CSIRO were actively involved in the establishment of a Co-operative Research Centre for Intelligent Manufacturing Systems and Technologies (IMST). The mission of this newly formed CRC is to be a world-class centre for the development and application of intelligent manufacturing systems and supporting

technologies. The Centre is expected to attract graduates into manufacturing by offering unique multi-disciplinary research projects for PhD and masters students, with opportunities for a large range of topics provided by the industry partners. It will also raise the profile of manufacturing through sponsoring and supporting new courses in its Continuing Education Program which will be co-ordinated with RMIT, Swinbourne and the University of Wollongong.

A research project on Development of Handling Techniques for the Injection of Coal into Boilers received funding of \$355,000 from the National Energy Research, Development and Demonstration Program as well as support from the Electricity Commission of NSW which provided equipment and funding for staff. A major test-rig is near completion in the Bulk Solids Laboratory.

The bulk materials handling research group organised the 4th International Conference on Bulk Materials Storage, Handling and Transportation and the 7th International Freight Pipeline Symposium at the University on July 6 to 8 for the IEAust and the International Freight Pipeline Society. Approximately 200 delegates attended, 53 from overseas.

The National Committee on Bulk Materials Handling, IEAust, established a new award – the 'AW Roberts Award' – for engineers up to the age of 35 to recognise their contributions to bulk-solids handling technology. The inaugural award was made at the July Conference to the Department's Dr Peter Wypych for his outstanding contributions to the development of pneumatic conveying technology and practice.

The Key Centre for Advanced Manufacturing and Industrial Automation (CAMIA) continued to develop new professional training courses with the aim of improving industrial management. Quick Change Over Manufacturing (QCOM) and Total Productive Maintenance (TPM) are examples. Several companies are undertaking the TPM course.



*Honorary Doctorates during the May graduation ceremonies was Dr Brian Loton AO, who had a long and distinguished career at BHP and a close liaison with the University and the Faculty of Engineering. His degree recognises his technical ability, his business acumen and human skills*



## Faculty of Health and Behavioural Sciences



*Associate Professor Sue Kirby is Director of the National Reference Centre for Continuing Education in Primary Health Care*

Collaboration with government and industry in pursuit of the Faculty's mission continued in 1992 as programs were consolidated and professional options for graduates enhanced in an increasingly interdisciplinary environment. In addition to the activities of many conjoint appointees and honorary fellows, the Faculty entered a new relationship as host to the National Reference Centre for Continuing Education in Primary Health Care. Its Director, Sue Kirby, is an Associate Professor in the Department of Public Health & Nutrition; other partners in the centre are the University of NSW, the Illawarra Area Health Service and the South Western Sydney Area Health Service. Collaboration with other institutions was also actively pursued during the year and Professor Christine Ewan convened and was elected chair of the Australian Council of Deans of Health Sciences. The Council will pursue the objectives of multi-disciplinary co-operation across the health sciences, quality assurance for clinical education and promotion of research.

Following the departure of Professor Tony Parker a review of the Department of Human Movement Science was conducted. Acknowledging the achievements and standing of the Department's programs the Review Committee recommended a change of name to Biomedical Science, reflecting an enhanced emphasis on human structure and function. The Department's plan supports this development and is focused on broadly defined Human Physiology. Expertise within the Department and use of the new Human Anatomy laboratory will enable major specialisations to be completed by students in Anatomy and Physiology within the Bachelor of Science (Health & Human Bioscience) program.

A 4 year Bachelor of Exercise Science

degree was approved as a professional preparation for students to work in the health and exercise industries. Along with this development the Department has facilitated the establishment of the Australian Association of Exercise and Sports Science which will accredit programs and practitioners in this profession.

A most successful conference on Applied Physiology and Biomechanics was hosted by the Department which joined with participants from Cumberland College and the University of Sydney. The day afforded an opportunity for researchers in human physiology to discuss completed and ongoing projects, primarily in the areas of cardiovascular, respiratory and muscle responses to exercise in health and disease.

The Faculty welcomed Carol Morse as Professor and Head of the Department of Nursing in February. She was the Senior Research Fellow in the Key Centre for Women's Health in Society at the University of Melbourne. Robyn Holden also joined Nursing as Associate Professor, a conjoint appointment with Psychiatric Services at Shellharbour Hospital (IAHS).

The Department of Nursing introduced the first cohort of aboriginal students from North West NSW. Twelve students from rural backgrounds entered through an Aboriginal Education Council special admissions program and were recruited in their communities of origin. Community liaison and innovative teaching practices have assisted students with their academic progress. Clinical experience and follow up in their own communities contributed to the great value of the program which will continue in 1993.

Irene Stein from Nursing was the 1992 recipient of the prestigious Ethel Hayton award for a 'notable contribution to an





*The first group of graduates from the MSc (Nutrition and Dietetics) course are, from left, Susan Alexander, Linda Tapsell, Course Co-ordinator, Heather Yeatman, lecturer, Barbara Eden, Jennifer McArthur, lecturer, Karen Jardim, Denise Chapman, Sonia Bradley and Jane Wishart*

activity which has enhanced community support for the University'.

The Department of Psychology conducted a workshop on Qualitative Research Methods. Led by Associate Professor Linda Viney, it attracted participants from six other universities and resulted in plans to hold annual workshops on this topic as well as a conference within the next two years.

A conference was presented in July by the Applied Cognitive Studies Research Group entitled "Research Into Reading: An International Perspective". Attended by over 200 people, mainly teachers, topics included the nature of reading difficulty, normal reading acquisition in children, the genetic basis of dyslexia, the relationship between spelling and reading and new tutorial methods in reading remediation.

During 1992 the Learning and Behavioural Support Unit (a subsidiary of the Psychological Services Unit) developed as a major regional resource and point of first referral for many parents, teachers and health workers concerned about some aspect of child or adolescent behaviour. Specialising in the assessment and treatment of children and adolescents, the Unit accepted almost 100 referrals for problems such as reading difficulties, attention deficit, hyperactive disorders, behaviour problems

and a range of emotional and psychological concerns.

The Master of Science (Nutrition & Dietetics) program in the Department of Public Health & Nutrition produced its first graduates in 1992. All were employed within weeks of completion and half of the second cohort received offers of employment prior to finishing their studies. The course has become well recognised professionally, particularly in community nutrition and for the quality of its teaching. Accredited by the Dietitians Association of Australia, the course consists of two sessions of coursework based on professional competencies, six months supervised field practice and a major research project. Lecturers Ms Linda Tapsell, Ms Heather Yeatman and Ms Jennifer McArthur are all active in the professional dietetic associations, Linda winning two awards (State and National) during 1992 for her contributions to the profession.

An innovative graduate program for mental health workers in rural areas was conducted utilising the technological capability of interactive video conferencing. Students attended sites in Albury, Goulburn, Orange and Lismore, drawn from often remote workplaces. In December they met as a group for a residential conference. This is a unique continuing professional education program as it is industry specific, postgraduate and multi-disciplinary.

## Faculty of Informatics

**T**HE FACULTY of Informatics enjoyed a very successful year in 1992. The highlights included the recognition by the Department of Industry, Technology and Commerce (DITAC) of the Department of Electrical and Computer Engineering as an Australian leader in attracting research grants in communications technology; the strong movement into the computer and communication security area; the coming of age of the Information Technology and Communication Unit; the focussing of research efforts in the Department of Mathematics resulting in the establishment of a new Department of Applied Statistics, and the winning of a Co-operative Research Centre (CRC) in Manufacturing.

Jennifer Seberry was appointed Professor of Computer Science and heads the computer and communication security research team. Professor Seberry is a Fellow of many learned societies including the Australian Computer Society and the Institute of Mathematics and its Applications; she is also the elected Director of the International Association for Cryptologic Research. Professor Seberry has published over 160 papers and co-authored six books. She has acted as a consultant for a number of major organisations and firms including Telecom, Neology, the Commonwealth Bank, Datamatic, the National Australia Bank, the State Bank of NSW, Integrated Research Pty Ltd and Industrial Controls Inc.

Together with her colleagues in computer and communication security, Professor Seberry won \$200,000 in Australian Research Council grants and established the Computer Security - Technical and Social Issues Research Program with University of Wollongong funding of \$45,000. The Program studies theoretical mathematical and social issues in a range of computer security areas such as databases,

communications, networks, protocols, operating systems, smart card access systems and user unique identification.

Associate Professor Joan Cooper was appointed Head of the Information Technology and Communication Unit. Associate Professor Cooper has 18 years experience in the Information Technology field including four years as Head of the Department of Management at the University of Newcastle and then as Reader in the Information Systems Department at ANU. She is currently involved in research into 'Business Integrity and Security in Electronic Trading'. This involves business, policy, technical and regulatory issues. Joan Cooper and members of her staff are also members of Professor Seberry's Computer Security - Technical and Social Issues Research Program.

The University was a partner in a successful bid for a \$14 million Co-operative Research Centre in Manufacturing. One of the CRC's three main research programs - System Components and Technologies - is led by Professor Chris Cook of the Department of Electrical and Computer Engineering.

On the basis of the work being conducted by the Switched Networks Research Centre within the Department of Electrical and Computer Engineering, Ericsson Australia Pty Ltd extended its work on signalling systems through a \$450,000 contract with the University.

The Speech Coding and Transmission Group in the Department of Electrical and Computer Engineering obtained a \$250,000 Generic Technology Grant from DITAC to research into new signal processing techniques required for the development of low cost mobile terminals for future mobile satellite systems.

The Faculty received a DEET grant for Computer Aided Learning (CAL) and



*Professor Jennifer Seberry, who took up the Chair of Computer Science in July 1992*





*Dr Zelinsky with the Yamabico mobile robot, on loan from Professor Yuta's robotics laboratory at Tsukuba University, Japan*

has established a Project Team and a laboratory. A considerable amount of work was undertaken by the CAL Team, in conjunction with Learnware (distributors of Authorware), to identify and eliminate problems caused by incompatibilities with the various versions of the operating systems, Authorware and Windows. A laboratory consisting of 35 Macintosh LC colour computers was established with one of its functions being the delivery of the CAL material.

The Software Engineering and Intelligent Systems Research Group was enhanced through the establishment of a Neural Network Research Centre by SITA. The work of this group was recognised by ETL which has invited Dr Alex Zelinsky to join their research team in Japan for two years.

This year the Faculty's research strength in telecommunications was increased by the appointment of Dr Peter Beadle from OTD Ltd to the team led by Professor Gary Anido.

The Department of Electrical and Computer Engineering continued its efforts to attract women into engineering by participating in the Engineering Summer School for Girls which was held in January. With the introduction of the Master of Computer Science, it also achieved a rapid increase in postgraduate student numbers. As part of the outreach to off-campus mature age students, the Master of Information Technology and Communication was offered at the University Centre in Sydney and attracted a good number of students.

During the year the Department of Mathematics focussed its research efforts in Applied Statistics, Engineering and Industrial Mathematics, and Analysis. The University has recognised these three research groups and approved the formation of a new Department of Applied Statistics from the beginning of 1993.

Overall, the Faculty was pleased with its achievements during the year both in the technology areas and the rejuvenation of traditional fields.



## Faculty of Law



*Previously Dean of the Faculty of Law at the University of Tasmania, where he had a spectacular career, Professor Martin Tsamenyi accepted the position of a Chair in Law at the University of Wollongong. He studied in Ghana, and at the Australian National University where he obtained the degrees of Master of International Law and Doctor of Philosophy. He has written and lectured on International, Environmental and Resources Law. He recently completed a review of mining legislation for the Tasmanian Government*

A MAJOR activity of the Faculty of Law was the continued development of its undergraduate and postgraduate courses, since 1992 was only the second full year of operation for the Faculty. Twelve further subjects for the Bachelor of Laws courses were introduced. The second year of the part-time Graduate Diploma in Law (Court Policy and Administration) was completed by its inaugural class of court administrators and members of the judiciary. Planning for the Graduate Diploma and Masters courses in Natural Resources Law, designed both for graduates in law who wish to specialise and for graduates in other disciplines, was completed, with the courses to begin in 1993.

With the appointment of a number of new staff during the year the Faculty began approaching its full staffing complement. The teaching staff now comprises one teaching fellow, 15 lecturers, four senior lecturers, two associate professors, two visiting professors, and four professors.

Associate Professor Ken Hale became Sub-Dean of the Faculty and Professor Martin Tsamenyi, previously Dean of the Faculty of Law at the University of Tasmania, accepted appointment to a Chair in Law. Professor Tsamenyi took his first degree in Ghana and then was awarded a scholarship to study at the Australian National University where he obtained the degrees of Master of International Law and Doctor of Philosophy. After a short period of teaching at the University of Papua New Guinea he accepted a position at the University of Tasmania where he has had a spectacular career. Professor Tsamenyi has written and taught in a number of areas, particularly International, Environmental and Natural Resources law. He has worked extensively in relation to the law of Fisheries, Forest and Mining and recently completed a review of mining

legislation for the Tasmanian Government.

Initiated by Professor Bruce Ziff, a visiting Professor from the University of Alberta, Canada, the first-ever Client Interviewing Competition for law students held in Australia was conducted by the Faculty in late 1991. In March 1992 the winners, Daniel Hartley and Karina Gava, both in the second year of the LLB program, finished a close third at the International Client Interviewing Competition. The competition is designed to provide a forum for the development of interviewing and counselling skills, activities which most practising lawyers undertake on a day to day basis. As such, it is concerned with similar objectives to those being pursued in the subject LLB 191 *Communication Skills* at Wollongong. The students found the experience thoroughly enriching. Robin Handley, a member of the Faculty who was on study leave in Canada, attended as the Faculty Adviser for the team.

The International Committee was thrilled that Australia was represented in the 1992 competition and the attendance of the University of Wollongong has started the process of forging links with law schools in the other countries involved in this program. The International Committee has expressed an interest in Australia serving as host to the competition as early as 1995. The Faculty is planning to hold the inaugural Australian Client Interviewing Competition early in 1993 and all Australian Law Schools have been invited to enter one team (comprising two students). At the end of 1992, ten Law Schools had indicated their intention to participate.

Consistent with its philosophy that the process of learning law lasts a lifetime, the Faculty has assumed the role of the major provider of continuing professional education in the Illawarra Region.

Second-year Law students Daniel Hartley and Karina Gava (at left) who finished a close third in the 1992

Client Interviewing Competition. With them are Peter Kell, a Wollongong solicitor (middle) who provided travel funds.

On the right are Robin Handley, a member of the Faculty who acted as adviser to the team, and Bruce Ziff, a Visiting Professor from Canada



It has also organised continuing education activities for other community groups, such as welfare workers, police, and health workers. Early in May it staged a successful conference on Higher Education and the Law which was attended by leading educational administrators from Australian Universities. Further activities were held in the areas of Information Technology & the Law, Product Liability Law, Conveyancing, Debt Recovery and Immigration Law.

A study of the needs of the Illawarra Legal Profession for Continuing Education was conducted by the Faculty, with support from a grant from the Law Foundation of NSW. A questionnaire was distributed and the responses have provided valuable assistance in the development of a program of regional continuing legal education.

The Clinical Placement Program began its real operation in 1992. The program is part of the subject LLB 205 *The Legal Profession and Australian Society*, a compulsory subject for the Bachelor of Laws. It aims to allow students to develop the notion that the practice and operation of legal institutions and the legal profession are an important part of the law which must be appreciated as part of a complete understanding of the law.

Students are exposed to the law in at least two elements of its operation, in

contexts where they will be able to perceive aspects of law which cannot be learnt from the printed or spoken word. During the early part of the year, about 20 students undertook work placements of various sorts with members of the private profession and a number of government organisations. Each student and each placement supervisor was required to submit a brief report to the subject co-ordinator.

Both the formal reports and the informal feedback show that the scheme has been a success for both placement supervisors and students. Over the 1992/1993 summer session, a further 55 placements would be undertaken. In addition, the Faculty has joined the Summer Clerks Scheme. Students who obtain summer clerkships under the scheme are eligible to have this counted as part of the requirement of the Clinical Placement Program.

Although the law collection of the University Library is not technically part of the Faculty, the library collection is vital to the success of the Faculty. Under the guidance of the Law Librarian, John Bahrij, the collection grew apace, thanks to strong support from the University and a funding grant from DEET which will make the law collection at the University of Wollongong (jointly with the University of Technology, Sydney) the national research collection of material on natural resources law.



## Faculty of Science



*Professor John Morrison, new BHP Chair in Environmental Science, took up his appointment in September. His main research interests are concerned with the impact of agriculture and of marine pollution in the south-west Pacific*

**T**HE BEGINNING of the academic year was marked by the Faculty of Science's occupation of the high-quality, purpose-built 'New Science Building'. This structure, which cost \$8.25 million and increases the floor space previously available to the Faculty by almost 40 per cent, houses first-, second- and third-year undergraduate teaching laboratories for the Departments of Chemistry and Physics, most of the technical and academic activities and staff of the Department of Geology, a small Faculty 'common-use' microcomputer laboratory, and the Faculty Office. As a result, the Departments of Chemistry and Physics have been able to refurbish and reallocate space, formerly dedicated to undergraduate teaching, to service the growing needs of much larger postgraduate enrolments, increasingly complex analytical equipment, and specialist research groups.

Relocation of the Department of Geology also made it possible for the Department of Biological Sciences effectively to double their available space, thus overcoming potentially hazardous overcrowding and permitting the development of badly needed research laboratories and facilities as well as the provision of personal work space for much enlarged numbers of honours and postgraduate students. The building was formally opened by the Chancellor, The Honourable R M Hope, on October 8.

The new year also saw a changeover in the Faculty's management following the resignation of the Foundation Dean, Associate Professor Peter Bolton, who accepted the position of Deputy Chief Executive Officer at the Hawkesbury campus of the University of Western Sydney. The Deanship was filled by Professor M G A Wilson, Professor and long-time Head of the Department of Geography and the

University's first Dean of Students.

Other changes involving senior Faculty personnel included Professor Helen Garnett's resignation from the Chair in Biology to take up the position of Scientific Manager at the Lucas Heights facility of ANSTO (from April 30); Professor John Morrison's arrival from the University of the South Pacific, holder of the BHP Chair of Environmental Science (from October 9).

Following Professor Garnett's resignation, the University called for a full review of the Department of Biology as a preliminary to refilling the Chair. Partly as a result of this review, the Department devoted much time and effort to the critical evaluation and redesign of its curriculum.

Late in the year a recommendation from the Review Committee that the undergraduate and postgraduate programs in Biotechnology – for which the Department of Biology holds prime responsibility – should also be reviewed, was implemented. The detailed report of the Review is not yet available. It is known, however, that the Committee unequivocally concluded that the development of the four-year Bachelor of Biotechnology along its present lines should continue. This decision was assisted by the arrival of two new staff with special expertise in the genetic engineering development of safe vaccines (Dr Mark Walker) and the biology of cancer spread (Dr Mark Baker). The University also accepted a recommendation from the Review Committee that the name of the department be changed from Biology to Biological Sciences, in order to identify more accurately the range of interests housed therein.

Implementation of the recommendations of the joint Review of the Departments of Geography and Geology, noted in the 1991 *Annual Report*, also continued





*At the opening of the Science Building on October 8: from left are the University Chancellor, Dr R M Hope, the Dean of the Faculty of Health and Behavioural Sciences, Professor Christine Ewan, and the Dean of the Faculty of Science, Professor Murray Wilson*

during 1992, most notably through the decision to advertise a Chair in either Physical Geography or Geology, the appointee being expected to Chair both the appropriate Department and the Joint Management Committee, as a first major step towards achieving that closer alignment of the two disciplines which the Review saw as desirable.

In the 1991 *Annual Report*, reference was made to the Faculty's proposal to offer two further four-year 'professional' degrees – the Bachelor of Medicinal Chemistry and the Bachelor of Medical Physics (Pass and Honours) – in 1993. In 1992, formal proposals for these degree programs were worked up and, after extensive discussions with and assistance from the relevant professions, professionals and employing authorities, approved for offer in 1993. It is already clear that the anticipated level of interest in these programs by high-quality students will be forthcoming. In each case, for example, the number of top-quality students applying for scholarship support to enrol in these programs has exceeded the number of places available; similarly, the number of

students applying for early admission to these programs under the University's 'top 10 per cent' system also substantially exceeded the places available.

With the offering of these degrees in 1993, the Faculty will have brought to completion – at least for the foreseeable future – its strategy for attracting a larger number of high-performing science students by surrounding, and supporting, the basic, three-year 'general' science degree (the BSc) with a small number of four-year specialist 'professional-vocational' degrees, in this case, the Bachelor of Biotechnology, the Bachelor of Environmental Science, the Bachelor of Medicinal Chemistry and the Bachelor of Medical Physics.

The Faculty's long-standing commitment to improving the quality and effectiveness of teaching at the first-year level continues as a significant focus of activity. In the Departments of Biology, Chemistry and Physics, special staff appointments and a variety of bridging and remedial courses of instruction have now been in place for at least 12 months. In mid-

*The new Science Building, which cost \$8.25 million and has increased the Faculty's floor space by nearly 40 per cent, has brought enormous benefits to the departments of Chemistry, Physics, Geology and Biological Sciences*

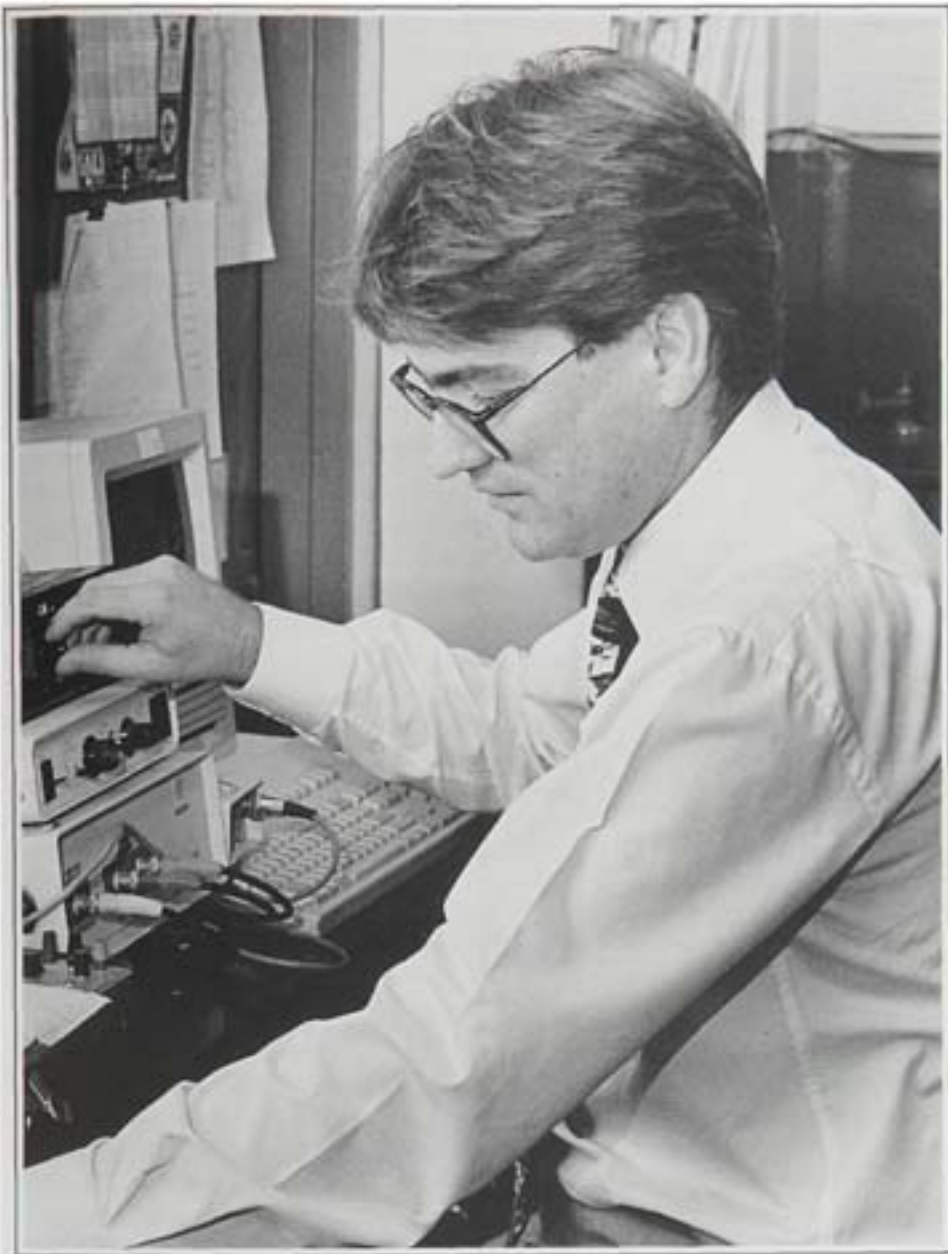


1992 financial support was obtained from the DEET-managed National Priority Reserve Grant to facilitate the development of a multimedia-based interactive teaching/learning system for use in bridging and conventional introductory courses in these three disciplines. This success was followed later in the year by the winning of two DEET-sponsored National Teaching Development Grants to permit the development of video-based teaching/learning modules for the improvement of pre-laboratory instruction in first- and second-year Chemistry and first-year Physics.

The year was also notable for the April commissioning of the Department of Chemistry's \$450,000 state-of-the-art Triple Quadrupole Mass Spectrometer with electrospray ionization. As noted in the 1991 *Annual Report*, this facility was purchased from a large ARC grant, together with contributions from the Ramaciotti Foundation, ANSTO, the

University and the Faculty. It is thought that this latest acquisition, in conjunction with existing equipment, provides the University with a very powerful world-class facility that will be of great value in a wide variety of studies, including understanding the molecular basis of senile cataract formation and heart disease, the development of new drugs for the treatment of rheumatoid arthritis, the development of polymers for use in paint coatings for metal roofing and fencing materials, and the analysis of chemical agents in diseased citrus plants. While there are five other such instruments elsewhere in Australia, this is the only one largely devoted to the study of proteins.

Other significant achievements within the Faculty include the acquisition of six of the ten APRA (industry) postgraduate awards won by the University (three each to the Departments of Chemistry and Biological Sciences) and the award



*Winner of the Royal Australian Chemistry Association's Australian Polymer Science and Technology Award for 1992 was Professor Gordon Wallace of the Department of Chemistry. The award recognises the Australian researcher under 40 who has made the most significant recent contribution to polymer science*

of the Royal Australian Chemistry Association's Australian Polymer Science and Technology 1992 Award to Professor Gordon Wallace of the Department of Chemistry. This award recognises the Australian researcher under 40 years of age who has made

the most significant recent contribution to polymer science.

Thus the Faculty enjoyed a very fruitful year in 1992 and will seek to capitalize fully the potential of its new facilities and equipment acquisitions.



# ACADEMIC AND ALLIED SERVICES

## *Aboriginal Education Unit*

**T**HE PROVISION of Abstudy grants for tertiary study appears to have two objectives:

- (a) the development of the individual;
- (b) the education of professionally trained people to contribute to the social, cultural and economic development of our community. To make real social and economic gains it is imperative to accelerate the pace of educational development. This will be achieved primarily through custom designed programs for special areas of need. The Aboriginal Education Centre (AEC) at the University of Wollongong has embarked on a series of education strategies to custom design programs for communities' special-interest groups. The long-overdue Aboriginal Faculty Development Program aims to train graduate Aboriginal students to teach at the university level. This course will be developed as a generic program with in-service faculty specialisation. The Centre also worked during the year to develop a major in Aboriginal/Torres Strait Islander education located in the Faculty of Education but available to the students in the Faculty of Arts and

other departments. In addition, a Graduate Diploma in Indigenous Studies for Educators was planned for teachers of the compulsory Aboriginal Studies units in schools and other professionals, eg, lawyers and health personnel; and a Certificate Course in Aboriginal/Torres Strait Islander Studies for the local community which will serve as a first training step for entry to tertiary studies.

Discussions were held with the Sydney Aboriginal Dance Groups for the development of a Creative Arts catchment and pipeline for students who might seek to undertake tertiary studies at this university.

In the nursing field, the AEC initiated the concept and wrote the submission for a skill-based process approach to nurse education for Aborigines. This proposal has been awarded a Teaching Initiative Grant for 1993.

In 1992, therefore, the AEC developed a purposeful direction with program initiatives focusing on key areas of development that are consistent with the University's resources and expressed community needs.

## *Careers & Appointments Service*

**T**HE CAREERS and Appointments Office gained a new home in a new and larger area which has provided a better resource library and reference room. Efficiency through computer support systems was the objective for 1992 and the outcomes in this area were quite rewarding. A program to install efficiency in campus interview processes was developed, an employment network was introduced and some directories were placed on computer for ready referral.

Graduates continued to be well placed in corporate companies and government departments even though fewer of these places were available. However, graduate recruitment became the more critical aspect of the careers development work with student and graduates.

There was a need to focus more efforts on job preparation and to operate special programs for graduates who were entering a long-term job-search group.

*Display for visitors to the Aboriginal Education Centre*



Some initial planning took place with the Alumni Association to provide ongoing support to those graduates who may experience early difficulties in finding the right type of graduate employment.

Through the efforts of the Careers and Appointments Officer, Patricia Webster, links were maintained with the strong employer groups.

The Careers and Appointments Officer again visited the USA this year – this time to attend the College Placement Council Triennial Conference in San Francisco. She took part in the special program on International and Global recruiting.

### *Centre for Staff Development*

**T**HE PRIMARY task for the Centre in 1992 was the research into, and development and implementation of, career development as the broad strategy for all staff development in the University. It will be some years before the benefits of the strategy will be fully realised, but the care taken with the developmental phase will ensure a firm basis for future initiatives. Career development has been introduced into a number of Australian corporations in recent years, but the University of Wollongong is the first higher education institution to implement it systematically.

Career development blends the career aspirations of individual members of staff with the Mission of the University as a whole. It provides career coaching for all members of staff which enables them more effectively to plan their individual careers. The process of extending career coaching throughout the University began late in the year and will be completed early in 1993.

In mid-year, two career development conferences were held which identified a number of institutional areas which needed reform and a number of staff groups which needed special attention. The need for research into job rotation and secondment policies and procedures was one area which was identified. Such research has been conducted and should lead to improvements which will benefit many general staff in particular. Other projects include investigating barriers to women's careers and the implications of award restructuring for general staff career planning.

A project involving the needs of Associate Professors began late in the year and will continue in 1993. Funding has been received to enable the Centre to provide extensive English language classes for those members of the cleaning staff

who need them and the Staff Development Fund has provided a grant for management training and development for senior academic staff who are not Heads of Departments.

### *Equal Employment Opportunity Unit*

**T**HE YEAR saw a number of exciting initiatives come to fruition after successful funding submissions for grants to develop projects. Prime among them was \$199,000 received from DEET to allow women academic staff time release from teaching to undertake Doctoral or Research Masters programs. Following a competitive process, 26 female staff members were successful in obtaining time release. \$16,000 was also received from the University's internally allocated Equity funds for the same purpose, which enabled seven additional women academic staff members to be given time release during Spring Session.

The Unit was successful in obtaining Equity funding for two postgraduate re-entry scholarships (with preference given to the areas of science or technology) for graduate women who have been for some time out of the workforce due to family commitments. Advertising took place in November and the successful applicants would be expected to begin their postgraduate study by March 1993.

A project grant application was made to the Office of the Status of Women for \$10,000 to develop a career development program in lower and middle management. If successful, the program will be piloted for general staff women on campus and then offered more widely to women in the Illawarra region.

A number of additional resources were purchased during the year to assist people with disabilities. The major acquisition was an OsCar character recognition system which enables blind or severely visually impaired people to access the print media. OsCar is installed with voice output and zoom text and is linked to an IBM computer with printer. Other acquisitions during the year were a Braillemate, which enables those proficient in braille to take notes in lectures, and a Toshiba Keynote Computer with voice output which is a useful adjunct to the OsCar.

Equity funding of \$2000 was also received for the publication of a teaching strategies guide for academic staff who lecture to students with disabilities. The guide is an education tool aimed at improving service delivery to this target group.



EEO was confirmed as having an integral part to play in the effective functioning of the University by the recommendations of a review which commended its activities and recommended the upgrading of the two senior positions in the Unit.

The Unit has been involved in substantial policy review during the year, including that of the internal grievance mechanism.

The University's workforce was surveyed during October and November to obtain information on the EEO group status of staff. This information is progressively being linked to computerised personnel data in order to obtain the statistical information required by legislative provisions.

### *Freedom of Information*

**T**HE UNIVERSITY is required under the New South Wales Freedom of Information Act, 1989, to provide the public with reasonable access to information about the University's policies and activities and to provide individuals reasonable access to information the University holds about them and a reasonable opportunity to ensure that records held about them are not incomplete, incorrect, out of date or misleading.

The University is committed to complying with the spirit and intent of the Freedom of Information Act and so ensure openness, accountability and responsibility in all public areas.

There were very few requests for information during 1992. Two inquiries were made by students who sought to look at their student files. These requests were answered without the necessity of lodgement of a formal application for access, and one informal enquiry was made for access to an internal working document of the University. A formal application did not eventuate.

In the period January to December 1992, there were no formal applications lodged for access to information. No outstanding applications were carried over from 1991 and no requests for internal review, nor any inquiries by the Ombudsman nor appeals to the District Court.

Therefore, in respect to the statistical data required to be published in Annual Reports, the University of Wollongong has a nil return.

### *Information Technology Services*

**D**URING 1992 the Information Technology Services (ITS) was involved in a number of major developments. The University expanded the use of videoconferencing in a number of key areas including teaching and tutorial activities, conference participation with invited guest speakers via videoconference, administrative applications and private point-to-point sessions. Postgraduate subjects in the Mental Health strand were offered to rural participants via videoconference facilities. These sessions involved multiway conferencing with up to four simultaneous participating sites. Invited participants also attended conferences at, for example, the University Centre in Sydney and interacted with other participants on the local Wollongong campus. As the University moves to a greater emphasis on off-campus learning, the video-conference facilities will play an increasingly critical role.

In 1992 the University began construction of a Multimedia and Open Learning facility (MOLAB), which will be the focus of activities in the development of open learning materials. ITS was involved in specifying the technology requirements for the facility and will continue to assist in the integration and deployment of such technology. The facility will house several revamped lecture theatres, with some suitable for live recording of activities, a fully functional television studio and post-production facilities. In addition there is provision for several instructional designers to operate in the production of additional materials for off campus use or in the construction of full multimedia-based instructional materials.

The use of e-mail spread to encompass over 85 per cent of the staff population. ITS continued to promote the devolved implementation of e-mail using Faculty-based mail servers and administration. The solid uptake and reliance by campus on e-mail was underpinned by a comprehensive training and support regime to assist users in coming to grips with e-mail.

1992 saw the continued enhancement of the campus fibre optic communications facility with the closure of the fibre 'ring'. This now provides a redundant path for communications on the campus network in the event that the fibre is ruptured at any one location.



## International Office

The University's international activities continued to develop in 1992. Although the economic recession in Asia has led to a decline in demand for education in 1/2, the University's international enrolment rose to above 1,200. India is a new major source of students for the University adding to the diversity of the student population.

The University's exchange programs with overseas universities also expanded during the year. Thirty-seven students from the USA spent up to one year in the University on approved exchange programs; 33 Wollongong students went abroad to the USA, UK and Spain. An exchange agreement with Uppsala University was also signed.

The University attended the Conference of the Council on International Educational Exchange for the second time. This year's conference was held in Berlin in collaboration with the Conference of the European Association for International Education, of which the University is also a member. The University was the only Australian institution with an information stand at the conference, providing a valuable opportunity to learn more of European education and advance the University's interests there. As a result, new linkages are under negotiation with France, Germany and Italy. The University was also represented at the Conference of NAFSA: Association of International Educators, the world's largest body for the exchange of information on international student mobility.

Over several years now, the University has been steadily developing links with the Middle East. There are now 85 Iranian postgraduates sponsored by the Ministry of Education and Culture in Iran. Two of the Directors of the Ministry of Education of the Government of the United Arab Emirates visited the University at its invitation in August. As a result, various proposals for off-shore teaching in Dubai and elsewhere have been formulated and will be developed in 1993 by the Illawarra Technology Corporation.

The University continued to co-operate with NSW and ACT universities in overseas marketing and policy co-ordination, expanding successfully the profile of Australian universities in the region. The University also initiated the creation of a joint university office in Japan, shared between it, the University of New England and Flinders University. The office is to represent the three universities in Japan and provide information on opportunities.



*Alumni Association Board of Management members: left to right (standing), Wendy Raikes, Secretary; Keith Phipps, President; Ruth Procter, Vice-President; (seated) Lauchlan Chipman, Pro Vice-Chancellor (ex officio); Rosemary Cooper, Treasurer; Juliet Richardson, Alumni Officer (ex officio)*

## Office of Development and Community Affairs

IN 1992 the four outreach activities of the University were brought together to form the Office of Development and Community Affairs (ODCA) which is located on Level 3 of the recent extension to the Union Building. The four units within the ODCA are the Friends of the University, the Cooperative Education Scholarships Program, the Alumni Office and the University of Wollongong Foundation.

The ODCA provides the infrastructure for the attraction of philanthropic endowment, goodwill and other forms of support for the benefit of the University. It develops and maintains relations with former students and staff of the University, for their benefit as well as that of the University, and it fosters projects that help to bond the University more closely with the communities of Wollongong and the Illawarra, including private and public business enterprises.

### *Alumni Association*

Early in the year the University Council endorsed the constitution drafted by the Alumni Steering Committee and the inaugural meeting of the University of Wollongong Alumni Association was held in June. Four office bearers (pictured) were elected to the Association's Board of Management.

One of the Board's first tasks was to set membership fees for alumni wishing to join the Association as Financial Members. Subscription rates were set at \$20.00 per annum or \$95.00 for a five-year period. By the end of 1992 over 100 alumni had joined the Association on this basis.

A number of alumni reunions took place during the year. These included a weekend of nostalgia for alumni from International House in January, two reunion dinners in Indonesia in August (in Jakarta and Bandung) and some faculty-based activities. The Faculty of Engineering alumni chapter organised a mid-year dinner at Wollongong City Gallery and held elections on the same night, and the Commerce Faculty alumni held several business meetings before electing office bearers in November. A reception for alumni from the Education Faculty was also held in November.

The alumni magazine, *Wollongong Outlook*, was produced and distributed twice to all alumni (over 13,000). This remains the most effective way to communicate with the alumni as a whole and offers the opportunity for some of our graduates and their achievements to be highlighted.

The new location of the Alumni Office in the Union Building assists in raising awareness about the Association amongst current students and also offers them a service through the sale of University memorabilia.

### *Co-operative Education Scholarships*

The Co-operative Education Scholarship Program, established in 1990 to operate in the 1991 academic year, aims to provide a range of sponsored undergraduate degree scholarships (\$9300 a year for the duration of the degree) for selected students who also have the opportunity to gain relevant professional work experience with sponsoring organisations. While a key objective is to attract outstanding students to the university, through the process it is intended to promote positive relationships with public and private enterprise and to publicise the University and its educational programs throughout the secondary school system in New South Wales.

Scholars are selected on the basis of:

- \* academic achievements
- \* motivation, interests and attitudes
- \* evidence of leadership, participation in sport, the arts and in school and community activities
- \* communication and inter-personal skills

Selection procedures involve:

- \* consideration of applications by a Selector Committee

- \* decisions on a short list of applicants for interview
- \* interview of short-listed candidates during November/December
- \* scholarship offers following the selection process

During 1992 there were 34 scholarship holders, from every quarter of NSW, enrolled in the Faculties of Commerce, Engineering, Informations and Law. Their University results were outstanding.

### *Friends of the University of Wollongong*

The Friends of the University had an active year both with internal restructuring and community projects. Early in the year the Friends encouraged members of the Students' Representative Council (SRC) to initiate fundraising projects for needy causes in the community. This received an enthusiastic response from students and the Illawarra Flame Tree Fashion Awards for promising young designers took place, raising \$3,000 for the Illawarra AIDS Foundation. Numerous local businesses provided sponsorship.

Once again, Open Day was held in late August, involving contributions and displays from departments and units across the campus. This proved to be a most successful day of information for potential students and interaction with the local community.

A highlight of the year was the opening of the Office of Development and Community Affairs, of which the Friends are an integral part. This transfer occurred at the culmination of a lengthy membership audit and the redesigning of a number of internal structures, within the Friends resulting in a streamlined new organisation ready to provide the University with renewed vigour in 1993.

### *The University of Wollongong Foundation*

The Foundation completed its first twelve months of operation at the end of 1992. These months were devoted to establishing sound modes of operating, which reflected the University's role when dealing with the community. The Foundation also developed its strategies for seeking funds for the University, including programs that will foster annual giving, deferred giving and gifts in-kind.

The registration of the Foundation has now been approved by the Australian Attorney General and the Australian Securities Commission. The official Office of the Foundation is located on Level 3, Union Building as part of the Office of Development and Community Affairs.



### *Centre for Staff Development*

The primary task for the Centre in 1992 was the research into, and development and implementation of, career development as the broad strategy for all staff development in the University. It will be some years before the benefits of the strategy will be fully realised, but the care taken with the developmental phase will ensure a firm basis for future initiatives. Career development has been introduced into a number of Australian corporations in recent years, but the University of Wollongong is the first higher education institution to implement it systematically.

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In mid-year, two career development conferences were held which identified a number of institutional areas which needed reform and a number of staff groups which needed special attention. The need for research into job rotation and secondment policies and procedures was one area which was identified. Such research has been conducted and should lead to improvements which will benefit many general staff in particular. Other projects include investigating barriers to women's careers and the implications of award restructuring for general staff career planning.

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### *University of Wollongong Library*

THROUGHOUT the year, Library activities were directed toward the delivery of services and the fulfilment of the goals identified in the forward planning document – *Prospect 2001*. Special emphasis was given to staff development, use of technology to improve services, and redefining the role of the Library in the scholarly process.

Use of Library facilities increased at a greater rate than the growth in enrolments and placed stress on service points such as the loans and information desks. The increased demand was particularly noticeable in the larger number of books which had to be reshelfed each day and higher occupancy of reader tables in the Library.

In July, the Library installed an ARIEL workstation to enable the transmission of scanned documents over the Internet. As this was the first installation in Australia, initial interaction was with North American libraries. Once other Australian libraries had acquired the system, it was possible to integrate it into the interlibrary loan operation. The ARIEL system is now the preferred means of delivering copies of journal articles.

In association with the other university libraries in NSW, Wollongong participated in the development of the LIBLINK catalogue enquiry software. This system allows the catalogues of the various NSW libraries to be searched using a single interface. The next stages of the LIBLINK development will involve providing online request of interlibrary loans and developing an interface with the Australian Bibliographic Network. LIBLINK is part of a wider strategy to improve access to library collections so that more rational use can be made of resources.

The Library was an Australian pioneer in the use of the UNCOVER journal article database. After a trial period to test the functionality of the database, a licence was acquired to allow any member of the University to access the database via the campus network. Not only does UNCOVER provide easy access to information about recently published journal articles, it also provides a document delivery service with a 24-hour supply period.

Facilities such as UNCOVER and ARIEL are portends of an emerging information environment which will be characterised by significant changes in the way in which scholarly information is stored and accessed. The extent to which optimum benefit can be derived from these changes de-





*An innovation in the University Library has been the purchase of two self-service-type check-outs as a means of speeding up book borrowing and return*

pendents to a large extent on the skills possessed by Library staff. A comprehensive staff development program was conducted throughout the year. This included skills development opportunities but the most important activities were those related to organisational change. The Deputy University Librarian, Felicity McGregor, was invited to address the staff of several other libraries on the methodology she has developed to ensure that staff of the University Library have the skills and attitudes necessary to meet changing conditions.

In 1993, implementation of *Prospect 2001* will continue with special attention given to extending reciprocal borrowing privileges to undergraduate students and entering agreements with selected universities for the co-operative provision of access to information. Initiatives began in 1992, particularly the provision of access to databases using the Australian Academic and Research Network, will become increasingly important.

# THE BERRY CAMPUS



*The aerial picture and close-up show the Berry campus, the latest and certainly among the more significant of the University's planning strategies for the future. The Vice-Chancellor touches on the development in his introduction to this Report*



# RESEARCH

## Graduate Faculty

**T**HIS YEAR has seen the consolidation of the Graduate Faculty as the entity through which all intramural-funded research is supported and monitored. The Faculty is responsible for the implementation and evolution of the University's Research Management Strategy. In 1992 it provided guaranteed funding over a three-year period for 17 Research Programs and 20 Research Groups (Groups receiving a lower level of funding). The criteria used to differentiate between the two are based on:

- quality and quantity of publications produced and spread of publications across members;
- external funding applied for /received with weighting being given to grants received from competitive granting bodies that are recognised as being based on peer review;
- number of individual members who have received external funding;
- number of postgraduate students and post-doctoral staff associated with the research;
- evidence of co-operative research;
- number of national/international keynote and invited lectures given by members;
- number of distinguished research visitors who have spent time with the researchers, the nature of activities undertaken and the outcomes attributable to their involvement; and
- the potential for further development.

The Graduate Faculty also continues to support individual researchers within the University, whose work is not related to any particular larger unit.

## Research Management Strategy

The Research Management Strategy is based on developing co-ordinated programs of research; not individual research topics but coherent groups of projects covering research themes. An integral part of the Strategy is the encouragement of Research Programs and Research Groups to allocate postgraduate scholarships, aiming to increase the knowledge base surrounding specific research.

The University is in the process of aggregating its major research activities for which it has international recognition. This is in line with the vision of the Research Management Strategy which aims to further the research effort of the University by providing an environment for co-operative and collaborative interdisciplinary research; with a view to developing research excellence, quality postgraduate training and strong and progressive links with leaders in relevant community organisations.

The Research Management Strategy is enhancing research across the campus, as reflected in the improved status of the University in the competitive Grants funding hierarchy.

## Research Report

The quality of the research being undertaken at the University is highlighted in the *Research Report* for 1991-92. This 136-page publication reports on the activities of all research under way on campus. The *Research Report* also lists all published research material produced by staff during the current research period. Copies may be obtained by writing to the Research Office at the University.





Dr R Rudziewicz, senior R&D scientist, inspects the quality of bushes in his research on the performance of Sandvik threading tools in automatic machinery

Professor Bill Lovegrove (right) is Dean of the Graduate Faculty. In this role he is, inter alia, responsible for developing policies for research and post-graduate studies at the University



Taking part in field work into the development of the Pilot Aid System for the Maritime Services Board at Port Kembla are Professor Fergus O'Brien, Mr L Olbach and Dr J Gray



Research in the University is under way to transfer technology developed in the laboratory equipment on the left to motor-vehicle air-conditioning systems. At the monitor here is Honours student Mauricio Mena

Left: The University's Transmission Electron Microscope. At the console is technical officer Craig Tillman

# RESEARCH GRANTS

## Australian Research Council

### Faculty of Arts

#### Creative Arts

- Ms S Rowley  
Developing Craft Theory, the Presentation  
of Australian Contemporary Craft in Public  
Museums and Galleries \$5,603

#### History and Politics

- Dr M Beresford  
Economic and Social History of Vietnam  
Since the Colonial Period \$7,758
- Dr J McQuilton  
Impact of the First World War on  
North Eastern Victoria \$6,465
- Dr A Wells  
History of Australian Communism \$38,512

#### Modern Languages

- Professor B Moloney  
The Discontinuous Tradition, the  
Development of the Novel in Italy in the  
Light of Social, Political and Cultural  
Conditions in Italy from the 18th Century  
to the Present \$25,000

#### Graduate School of Journalism

- Professor C Lloyd  
A National Survey: Four Page Module in  
National Social Science Survey (NSSS) \$10,344

#### Sociology

- Ms R Albury  
Abortion Politics, Medical Science and  
Practice, Law and Public Policy in the  
Social Construction of Women as  
Reproductive Beings \$6,896

- Professor J Bern, Dr A Metcalfe and  
Dr E Jordan  
The Hunter in Transition: Social  
Readjustment in a Major Industrial Region \$36,200

#### Science and Technology Studies

- Associate Professor E Richards  
The Construction of Sexual Selection:  
The History of the Social Shaping of a  
Biological Concept \$25,000

### Faculty of Commerce

#### Economics

- Professor D Lewis and Dr C Nyland  
Physical Differences Between Males  
and Females and the Sexual Division  
of Labour \$33,100
- Dr M Metwally  
Analysis of Trade Between Australia  
and Middle Eastern Countries \$45,000

#### Management

- Dr T Williams  
The Effects of New Information  
Technology on Inter-organisation  
Relations: Electronic Taxation Return  
Lodgement in Australia \$17,000

### Faculty of Education

- Professor B Cambourne  
Infrastructure Mechanism B Applied  
Cognitive Studies \$50,000

- Professor J Hedberg and Dr B Harper  
Cognitive Demands of Navigational  
Systems in Interactive Multimedia  
Learning \$6,896

- Ms J Wright  
Dr A Cranny-Francis, Mr W Winsor and  
An Analysis of the Ways in Which  
Institutional Discourse Operating in the  
Secondary English Classroom Contribute  
to Educational Success and Failure \$9,482

### Faculty of Engineering

#### Civil and Mining Engineering

- Dr R Kohoutek and Professor N Murray  
Full Scale Test of Semi-Rigid Joint for  
Steel Frames Under Dynamic Load \$25,000

- Professor Y C Loo  
Punching Shear Failure at Corner  
and Edge Columns of Post-Tensioned  
Concrete Flat Plates with Spandrel  
Beams \$33,500



Associate Professor D Montgomery  
Investigation of Material Behaviour,  
Pressures and Losses During Concrete  
Pumping \$7,758

Professor L C Schmidt  
Influence of Material Effects on the  
Behaviour of Steel Tubular Struts Subject  
to Prior Inelastic Flexural Strains \$26,000

Professor L C Schmidt  
Shape Creation and Erection of Metal  
Space Structures by Means of Post-  
tensioning \$31,000

Professor R N Singh  
Numerical Modelling of Water Inflow  
to Longwall Coal Workings \$10,344

Dr Y W Wong  
Unconventional Steel and Concrete  
Composite Beams \$8,620

### Materials Engineering

Associate Professor G Delamore  
Crystallisation Kinetics of Metallic Glasses \$46,000

Associate Professor D P Dunne and  
Associate Professor N Kennon  
Research and Development of Iron Based  
Shape Memory Alloys \$30,000

Associate Professor D P Dunne and  
Associate Professor G Delamore  
The Structure and Properties of Melt Spun  
Shape Memory Alloys \$25,000

Associate Professor D P Dunne  
Development of a Quenched and  
Tempered 690MPa Yield Strength  
Structural Plate Steel with Improved  
Weldability and Fabricability \$42,900

Mrs S Nightingale  
Microwave Sintering of Zirconia-based  
Ceramics: A Pilot Project \$44,000

Dr G M Spinks  
Miscibility Effect on Rigidity and  
Toughness of Polymer Thermosets with  
Elastomers \$12,068

### Mechanical Engineering

Dr P Cooper  
Turbulent Natural Convection and Heat  
Transfer in Enclosures - A Study Using  
Water Filled Scale Models \$6,896

Dr W K Soh  
Cavitation Bubbles Near Compliant  
Boundaries \$8,620

Associate Professor A K Tieu and  
Mr G E Wood

Superlaminar Flow in Hydrodynamic  
Bearings \$11,206

### Faculty of Health and Behavioural Sciences

#### Public Health and Nutrition

Professor C Ewan  
Infrastructure Mechanism B Health and  
Behavioural Sciences: Research Institute  
Infrastructure \$100,000

#### Human Movement

Dr N A S Taylor  
Environmental Stress: The Effects of  
Ageing Upon Thermal Control \$8,620

#### Psychology

Dr S Avons  
Components of Short-term Visual Memory \$8,620

Professor W J Lovegrove  
The Role of Spatial Frequency Mechanisms  
and Attention in the Global Precedence  
Effect in Control and Specifically Disabled  
Readers \$32,000

Professor W J Lovegrove  
Towards an Empirical Basis for Reading  
Remediation \$25,900

### Faculty of Informatics

#### Computer Science

Dr J P Gray  
Implementation of a Broadcast-based  
Abstract Architecture on Distributed  
Memory Parallel Hardware Using T9000  
Series Transputers \$7,758

Associate Professor J Pieprzyk and  
Professor J Seberry  
Design of a Message Hashing Algorithm \$66,000

Dr R Safavi-Naini and Professor  
J Seberry  
Analysis of Secure Protocol \$41,000

Professor J Seberry and Professor A Street  
Access Schemes for Computer Security  
from Families of Combinatorial Designs \$35,000

Electrical and Computer Engineering  
Dr F Naghdy and Professor C Cook  
Parallel Control of Computer Integrated  
Manufacture \$10,775



Dr P O Ogunbona and Associate Professor  
FJ Paoloni  
Application of Lapped Orthogonal  
Transform Coding to Video Transport on  
ATM Networks \$10,775

### Mathematics

Professor P Broadbridge and Professor J Hill  
Computer-aided Search for Exact Solutions  
of Non-linear Partial Differential  
Equations \$46,000  
Dr S P Zhu  
Numerical Modelling of the Response of  
the Northwest Shelf to Tropical Cyclones \$10,344

### Faculty of Law

Professor J Goldring  
Infrastructure Mechanism C Research in  
Natural Resources and Mining Law \$200,000

### Faculty of Science

#### Biology

Dr D A Ayre, Dr A Davis and Associate  
Professor R Whelan  
The Ecological and Evolutionary  
Consequences of Contrasting Mating and  
Dispersal Strategies in Ascidians; Effects on  
Individual Fitness and the Genetic  
Structure of Populations \$102,500

Dr D A Ayre and Dr T Hughes  
Population Dynamics and Genetics of  
Corals on the Great Barrier Reef \$27,000

Dr A Davis  
Chemical Ecology of Southern Australian  
Marine Invertebrates; A Survey of Levels  
of Fouling and an Investigation of the  
Mechanisms of Antifouling Defense \$12,068

Professor H M Garnett  
Immune Systems of Salmonid and  
Cyprinid Fish; Development of Diagnostic  
Procedures \$9,917

Associate Professor A Hulbert  
The Cellular Basis of Different Levels of  
Resting Metabolism in Vertebrates \$60,000

Associate Professor R Mc Lilley  
Genetic Fingerprinting for Species  
Identification in the Salt Tolerant Green  
Alga *Dunaliella* \$10,775

Dr M J Walker  
Utilization of Salmonella SPP for  
Stimulating Anti-Pertussis Immune  
Response in the Lung \$10,344

#### Chemistry

Professor J B Bremner  
Development of New Heterocyclic  
Medicinal Agents \$10,344

Professor J B Bremner  
Design and Synthesis of New Heterocyclic  
Compounds \$57,800

Dr J Carver  
The Characterisation of Australian Native  
Cucurbitaceae Proteinase Inhibitors \$11,206

Dr D Griffith  
The Emission of Trace Gases from  
Biomass Burning in Australia; Their Role  
in Atmospheric Chemistry and Global  
Changes \$56,900

Dr D Griffith  
Non Intrusive Measurement of  
Atmospheric Composition Using a  
Portable Long Path Fourier Transform  
Infrared Spectrometer \$25,000

Dr D F Hurst  
Identification and Quantification of  
the Gaseous Emissions of Laboratory-  
controlled Biomass Fires \$7,758

Professor L Kane-Maguire  
Kinetics and Mechanisms of Metal  
Carbonyl Cluster Reactions \$51,000

Professor L Kane-Maguire and  
Professor G Wallace  
Preparation and Testing of Chiral  
Conducting Polymers for Use in the  
Production of Pure Drugs \$9,917

Dr W E Price  
Kinetic Studies of Extraction of  
Constituents from Citrus Fruits \$9,913

Dr S Pyne  
Asymmetric Synthesis of Novel and  
Pharmacologically Active Chiral Amino  
Acids and Related Compounds \$30,000

Dr M Sheil  
Triple Quadrupole Mass Spectrometer \$200,000

Dr M Sheil  
Combining Capillary Electrophoresis and  
Electrospray Mass Spectrometry for the  
Analysis of Biological Molecules and  
Environmental Pollutants \$10,344

Professor G G Wallace  
Chemistry and Electrochemistry on  
Conducting Electroactive Materials \$35,000

Professor G G Wallace  
Transport of Low Molecular Weight  
Electroinactive Organic Molecules Across  
Conductive, Electroinactive Polymers \$10,344

Professor G G Wallace  
Queen Elizabeth II Fellowship  
Molecular Imprinting of Conducting  
Polymers \$66,034

Professor G G Wallace and Australian  
Defence Industries Ltd  
Development of New Sensing Technologies  
Based on Conducting Polymer Tapes \$58,900

## Geography

Dr L M Head and Dr Fullagar  
Prehistoric Human Environments and  
Aboriginal Technology in the Far East  
Kimberley \$8,620

Associate Professor G Nanson,  
Dr C Woodroffe and Associate  
Professor R Young  
Quaternary Change in Riverine and  
Estuarine Environments of the Australian  
Region \$105,000

Ms A O'Neill, S J Fraser and Associate  
Professor R Whelan  
Remote Estimation of Plant Biochemistry  
Using High Spectral Resolution, Airborne  
Visible Infrared Imaging Spectrometer \$12,068

## Geology

Dr P F Carr, Dr L E A Jones and  
Dr C L Fergusson  
Isotropic and Geophysical Constraints  
on the Tectonic Evolution of the Southern  
Sydney Basin \$6,034

Dr C Fergusson and Dr P F Carr  
Geology and Tectonic Significance of the  
Anakie Inlier, Central Queensland \$35,000

Dr A C Hutton and Dr D H French  
Palaeolimnology and Geochemistry of the  
Condor and Nagoorin Tertiary Sequences \$36,000

## Physics

Professor P Fisher  
Neutron Scattering and Accelerator  
Radiation Research \$374,000

Dr K J Duff, Professor P Fisher,  
Dr C Freeth, Dr R Lewis, Dr A Martin,  
Dr P Simmonds and Dr R Vickers  
Electronic and Vibrational Spectra of  
Solids \$75,000

## National Health and Medical Research Council

### Faculty of Health and Behavioural Sciences

#### Graduate School of Health and Medical Sciences

Professor P J Barter  
Role of Unesterified Fatty Acids in  
Regulating Plasma Cholesterol \$116,233

#### Public Health and Nutrition

Professor D G Calvert, Dr L Harrison  
The Cultural Basis of Food Choice and  
Dietary Habits \$7,835

Professor C Ewan  
Health Impacts of Atmospheric Change  
and Ecologically Sustainable Development \$17,320

### Faculty of Science

#### Biology

Professor H M Garnett and  
Dr S Woodroffe  
Interaction of Human Cytomegalovirus  
With Endothelial Cells \$68,590

Associate Professor E J Steele  
Mechanism of Somatic Hypermutation in  
Antibody Variable Region Genes in Mice \$30,515

Dr A Sullivan-Taillyour  
Study of Human Cytomegalovirus \$41,127

#### Chemistry

Dr J A Carver and Associate Professor  
R J Truscott  
Understanding the Mechanism of  
Calcium-Induced Opacification in Lenses:  
Human Cortical Cataract \$37,346

Associate Professor R J Truscott,  
Dr J A Carver, Dr S Pyne and Dr M Sheil  
Silicon Graphics Personal Iris Computer  
Workstation and Isoelectric Focussing  
Apparatus \$15,000

Associate Professor R J Truscott  
Mechanism of Senile Nuclear Cataract  
in Man \$53,645

Associate Professor R J Truscott  
Tryptophan Metabolism in Normal and  
Diseased States \$23,438

## CSIRO/University of Wollongong Collaborative Research Scheme

### Faculty of Engineering

#### Civil Engineering

Professor L C Schmidt  
Traffic Generated Pollution \$10,000

#### Materials Engineering

Mrs S Nightingale  
Characterisation of Microwave Sintered  
Zirconia Based Ceramics \$16,500

### Faculty of Science

#### Biology

Professor H M Garnett  
Effect of Myxoma Virus on the Immune  
System of Rabbits \$10,000

Associate Professor R J Whelan  
Survey, Classification and Cataloguing  
of Native and Introduced Insect Visitors  
to Flowering Plants \$8,125

#### Chemistry

Dr D Griffith  
The Role of Fire in Tropical Savanna  
Ecosystems in Nutrient Cycling,  
Atmospheric Chemistry and Greenhouse  
Gas Emissions \$10,000

#### Geography

Dr C Woodroffe  
Landscape Evolution in Kakadu National  
Park \$9,500

## Other Research Grants

### Faculty of Arts

#### Creative Arts

University Research Grant  
Dr A Schultz  
Studies in Contemporary Arts Practice  
and Performance in Australia \$17,500

#### English

University Research Grant  
Professor J Wieland  
Literature and the Colonial Legacy \$44,000

### History and Politics

University Research Grant  
Dr M Beresford and Dr D O'Brien  
Asia Pacific Development Studies \$35,000

### University Research Grant

Professor J Hagan  
Labour History and Industrial Relations \$25,000

### Graduate School of Journalism

University Research Grant  
Professor C Lloyd  
The Australian Media in the 1990s \$4,000

### Modern Languages

University Research Grant  
Associate Professor B McCarthy  
Beginner French Pronunciation: Profile  
and Remediation \$5,000

### Philosophy

University Research Grant  
Dr R Dunn  
Limits of Control of One's Own  
Psychological Attitudes \$350

University Research Grant  
Dr G Oppy  
Foundations of Philosophical Theology \$500

University Research Grant  
Dr D Simpson  
Philosophical Foundations of  
Communication & Interpretation \$350

University Research Grant  
Dr S Uniacke  
The Self Defence Justification of Homicide \$350

### Science and Technology Studies

Bilateral Science and Technology  
Collaboration Program  
Dr R J Badham  
Collaboration with German Institute  
Co-ordinating the European Commission  
Fast Network \$2,505

Department of Industry Technology,  
Science and Commerce  
Dr R J Badham  
Smart Manufacturing Project Mission  
to Germany 1992 \$20,992

University Research Grant  
Associate Professor J Schuster and  
Dr B Martin  
Science & Technology Research  
Program \$49,000



## Sociology

<i>University Research Grant</i>	
Professor J Bern, Ms R Albury, Dr A Aungles and Professor S Castle	
The Sociological Analysis of Political and Cultural Change	\$7,500

## Faculty of Commerce

### Accountancy

<i>University Research Grant</i>	
Professor M Gaffikin	
Accountability and Financial Reporting	\$7,500

### Economics

<i>University Research Grant</i>	
Dr C Nyland	
Labour Market Analysis	\$44,000
<i>University Research Grant</i>	
Associate Professor J Tran Van Hoa	
Applied Economic Modelling	\$25,000

### Management

<i>University Research Grant</i>	
Dr T Williams	
Management Strategy and Organisational Change	\$20,000

## Faculty of Education

<i>University Research Grant</i>	
Professor C Fasano	
Education Policy Program	\$44,000

<i>University Research Grant</i>	
Ms C Fox	
Curriculum Research Group	\$7,500

<i>University Research Grant</i>	
Mr B Winser	
Learning Environments and Equity Program	\$18,350

<i>Department of School Education (South Coast Region)</i>	
Professor R D Linke	
Joint Research Publication on Research on School Education	\$5,500

<i>Department of School Education (South Coast Region)</i>	
Ms J Turbill	
Literacy and Learning Project	\$32,220

<i>Australian Sports Commission</i>	
Dr P Webb	
An Analysis of Officiating Issues in Australian Sport	\$1,000

<i>Disadvantaged Schools Program</i>	
Mr B Winser	
Evaluation of the Write it Right Project	\$52,618

## Faculty of Engineering

### Civil Engineering

<i>University Research Grant</i>	
Associate Professor R Chowdhury	
Water Engineering & Geomechanics	\$64,000

<i>University Research Grant</i>	
Dr R Kohoutek	
Experimental and Analytical Stress Analysis of Structures	\$15,000

<i>University Research Grant</i>	
Associate Professor Y C Loo	
Structural Engineering and Construction	\$31,000

<i>Australian Postgraduate Research Award - Industry</i>	
Dr R Kohoutek	
Bridge Analysis and Rating System	\$18,403

<i>Coal Research Development and Demonstration</i>	
Dr N Aziz	
Design and Development of Longwall Dust Extraction System for Improved Productivity and Safety	\$76,590

<i>Coal Research Development and Demonstration</i>	
Professor L C Schmidt	
Rapid Face Bolt System Development	\$69,500

### Materials Engineering

<i>University Research Grant</i>	
Professor D P Dunne	
Advanced Materials & Surface Engineering	\$75,000

<i>Australian Institute of Nuclear Science &amp; Engineering</i>	
Professor D P Dunne, Dr C G Chipperfield and Mr J Lloyd	
The Effect of Residual Stress on Fatigue Crack Growth	\$6,200

<i>Australian Institute of Nuclear Science &amp; Engineering</i>	
Dr M Samandi	
Investigation of Plasma Immersion Ion Implanted Steels	\$12,000

### **Mechanical Engineering**

<i>Australian Electricity Supply Industry Research Board</i>	
Dr A Basu	
Allowance for Inelastic Stretch of Conductors (Prestressing Overhead Conductors)	\$45,000
<i>Defence Science &amp; Technology Organisation</i>	
Dr W K Soh	
A Scale Model Study of Underwater Explosion Bubbles	\$56,936
<i>University Research Grant</i>	
Dr A G McLean	
Bulk Materials Handling and Physical Processing	\$70,000
<i>University Research Grant</i>	
Associate Professor A K Tieu	
Applied Mechanics and Advanced Manufacturing	\$69,000

## **Faculty of Health and Behavioural Sciences**

### **Human Movement Science**

<i>Illawarra Area Health Service Research Grant Scheme</i>	
Dr S Boucher, Dr L Lee	
Cardiac Rehabilitation Evaluation System	\$10,600
<i>Novo Nordisk Regional Diabetes Support Scheme</i>	
Dr S Boucher, Dr Moses and Ms R Griffith	
Cardiac Rehabilitation Evaluation System	\$9,410
<i>University Research Grant</i>	
Dr N Taylor	
Exercise and Fitness	\$25,000
<i>Australian Sports Commission Applied Sports Research Program</i>	
Dr N Taylor	
Respiratory Gas Exchange Kinetics; A New Model for Evaluation of the Athlete	\$10,000
<i>Worksafe Australia</i>	
Dr P Milburn, Mr R Barrett	
Assessment of Lumbar Stress in Domestic Bedmaking	\$30,592

### **Nursing**

<i>Illawarra Area Health Service</i>	
Ms L Wheeler, Ms J Owens	
Menopause - Perceptions and Misconceptions	\$6,231

### **Psychology**

<i>University Research Grant</i>	
Professor W J Lovegrove	
Applied Cognitive Studies	\$25,000
<i>University Research Grant</i>	
Associate Professor L L Viney	
Clinical Psychology	\$10,000
<i>Australian Postgraduate Research Award - Industry</i>	
Dr P Smith	
Performance Efficiency and Supervision Following Job Redesign and Award Restructuring	\$18,403

### **Public Health and Nutrition**

<i>University Research Grant</i>	
Professor D G Calvert	
Public Health Research Program	\$20,000
<i>NSW Department of Health</i>	
Ms H Yeatman, Ms L Tapsell and Professor D G Calvert	
Illawarra Food and Nutrition Strategy Project	\$50,000
<i>Rural Health Support Education &amp; Training Program</i>	
Professor C Ewan	
Review of Rural Clinical Opportunities in Health Sciences Curricula	\$13,427
<i>Illawarra Area Health Service</i>	
Dr D Jeffs, Professor D G Calvert	
Effects of the Environment on Asthma Morbidity in the Illawarra	\$29,547
<i>Illawarra Area Health Service Research Grant Scheme</i>	
Mr P O'Halloran, Dr V Turnbull, Dr I Pakula, Associate Professor R Harris, Professor D Calvert and Associate Professor R Holden	
Evaluation of Psychiatric Rehabilitation; The Psychiatric Rehabilitation Unit, Lake View House, Shellharbour Hospital	\$10,000
<i>National Better Health Program</i>	
Professor C Ewan	
Establish and Auspice a National Reference Centre for Continuing Education in Primary Health Care	\$333,000

<i>National Better Health Program</i>			<i>Australian Telecommunications &amp; Electronics Research Board</i>	
Professor C Ewan, Dr A Young, Associate Professor E Bryant and Professor D G Calvert			Dr J Chicharo	
Draft Report National Framework for Health Impact Assessment		\$54,657	Development of a Constrained Notch Fourier Transform	
				\$5,000
<b>Graduate School of Health &amp; Medical Sciences</b>			<i>Australian Telecommunications &amp; Electronics Research Board</i>	
<i>Clive &amp; Vera Ramaciotti Foundation</i>			Dr A Perkins, Mr B Ribbun	
Professor P J Barter			Low Bit Rate Speech Transmission for a Satellite Channel	
Investigation of a Population of Apolipoprotein AI Containing Particles Which Dissociates from High Density Lipoproteins		\$20,000		
			<i>Australian Electricity Supply Industry Research Board</i>	
<i>Illawarra Area Health Service</i>			Dr J Chicharo	
General Practice Evaluation Program			Application of Adaptive Digital Filtering for On-Line Identification and Tracking of Harmonics Associated with Power Converters	
Dr H J Fardy, Dr J Jeffs, Professor D Calvert and Professor C Ewan		\$112,630		
Which GPs Provide Quality Care			<i>Australian Electricity Supply Industry Research Board</i>	\$17,080
<i>General Practice Evaluation Program</i>			Associate Professor V J Gosbell	
Dr H J Fardy, Dr J Jeffs and Professor D Calvert			Harmonic Behaviour of Power Systems Load	
Consensus Principles of Practice and Quality Care in General Practice		\$60,747		
			<i>Australian Institute of Nuclear Science and Engineering</i>	\$22,560
			Associate Professor F Paoloni	
			Development and Applications Studies on a Metal Vapour Vacuum Arc Ion Implanter	
<b>Faculty of Informatics</b>			<i>Department of Industry, Technology &amp; Commerce - Bilateral Collaboration Scheme</i>	\$9,100
<i>University Research Grant</i>			Professor C D Cook	
Professor S Morris			Enterprise Integration Project - Loughborough University	
Analysis Research		\$20,000		
			<b>Information Technology and Communication</b>	\$10,000
<b>Computer Science</b>			<i>Telecom Australia Fund for Social &amp; Policy Research in Telecommunication</i>	
<i>University Research Grant</i>			Dr R A Joseph	
Professor F O'Brien and Dr P McKerrow			The Politics of Telecommunications Reform; A Comparative Study of Australia & New Zealand	
Software Engineering		\$25,000		
			<i>Telecom Australia Fund for Social &amp; Policy Research in Telecommunication</i>	\$7,884
<i>Australian Postgraduate Research Award - Industry</i>			Ms U Mansfield	
Dr P McKerrow			Identification of New Roles for Telecommunications Organisation within the Broader Information Industry	
Echolocation Models		\$18,403		
			<b>Mathematics</b>	\$9,920
<b>Electrical and Computer Engineering</b>			<i>University Research Grant</i>	
<i>University Research Grant</i>			Professor D Griffiths	
Professor G Anido			Applied Statistics	
Advanced Telecommunications Research Program		\$75,000		
				\$7,500
<i>University Research Grant</i>				
Professor C D Cook				
Industrial Automation Research Program		\$75,000		



University Research Grant  
Professor J M Hill  
Engineering and Industrial Mathematics \$25,000

## Faculty of Law

University Research Grant  
Mr D Considine  
Prospectus Requirements & Corporate  
Regulatory Strategies \$1,000

University Research Grant  
Professor D Farrier  
Preparation of the Second Edition of the  
Environmental Law Handbook \$4,550

University Research Grant  
Professor J Goldring  
Nature and Jurisdiction of Administrative  
Tribunals in Australia \$7,500

## Faculty of Science

### Biology

Rothmans Foundation  
Dr G Vaughton  
Rothmans Fellowship \$45,780

University Research Grant  
Associate Professor A J Hulbert  
Australian Flora & Fauna Research  
Program \$70,000

University Research Grant  
Associate Professor R Mc Lilley  
Biological Macromolecules \$75,000

University Research Grant  
Associate Professor E J Steele  
Mechanism of Directional Mutation in  
the Immune System \$5,000

Wet Tropics Management Authority  
Dr R Coles  
Survey of Bat Distribution in the Wet  
Tropics World Heritage Area \$4,000

Wool Research & Development  
Corporation  
Professor H M Garnett  
Effect of Myxoma Virus on the Immune  
Response \$14,225

Australian Centre for International  
Agricultural Research  
Professor H M Garnett  
Detection of Citrus Greening in Thailand \$41,000

Australian National Parks & Wildlife  
Service  
Dr R Coles  
Survey of Bats of the Uluru National Park \$6,124

Clive & Vera Ramaciotti Foundation  
Professor H M Garnett  
Elutration System for Studying the Patho-  
biology of Human Cytomegalovirus \$20,000

GBF - German Institute for Biological  
Research  
Dr M J Walker  
Development of a Recombinant Vaccine  
Against Whooping Cough \$14,442

Government Employees Assistance to  
Medical Research Fund  
Associate Professor E J Steele  
Mechanism of Somatic Hypermutation  
in Antibody Genes \$18,500

National Heart Foundation  
Professor H M Garnett  
Perturbation of Normal Endothelial Cell  
Function \$37,383

Pig Research & Development Corporation  
Dr M J Walker  
Development of a Novel Vaccine Delivery  
System for Pigs \$14,000

### Chemistry

University Research Grant  
Dr D W Griffith  
Remote Sensing of Atmospheric  
Composition by FTIR Long Path  
Absorption Spectroscopy \$4,500

University Research Grant  
Professor L Kane-Maguire  
Bioactive Molecules \$75,000

University Research Grant  
Professor G G Wallace  
Intelligent Polymer Research Program \$33,000

University Research Grant  
Dr S Wilson  
Special Monitoring of UVB Radiation \$5,000

Australia-China Institutional Links  
Program  
Professor L Kane-Maguire,  
Dr M Sivakumar  
IDP Environmental Protection Project \$75,000

*Australian Postgraduate Research Award - Industry*  
Professor L Kane-Maguire, Dr S Pyne  
Asymmetric Synthesis of Chiral Drugs and  
Radio-Labelled Pharmaceuticals and  
Biological Macromolecules \$18,403

*Australian Postgraduate Research Award - Industry*  
Dr S Pyne  
Synthesis and Evaluation of Novel  
Immunosuppressive Agents \$18,403

*Bilateral Science & Technology Collaboration Research*  
Dr D W Griffith  
Ground Based Remote Sensing of the  
Atmospheric Composition by FTIR  
Spectroscopy \$2,383

*Bilateral Science & Technology Collaboration Research*  
Dr R Truscott  
Cataract Formation in Man \$8,000

*Bureau of Meteorology*  
Dr D W Griffith, Dr S Wilson  
Cape Grim Baseline Atmospheric  
Pollution Station \$29,000

*Clive & Vera Ramaciotti Foundation*  
Dr M Sheil, Professor L Kane-Maguire  
Mass Spectrometry of Bioactive Molecules \$20,000

## Geography

*University Research Grant*  
Associate Professor G C Nanson  
Quaternary Environmental Change \$70,000

*Bilateral Science & Technology Collaboration Scheme*  
Dr C D Woodroffe  
Study of the Late Quaternary Alluvial and  
Coastal Plains of Sarawak, Malaysia \$9,456

*Department of Arts, Sports, Environment, Tourism & Territories*  
Dr C D Woodroffe  
Vulnerability Assessment of Rising Sea  
Levels to Kiribati \$27,802

*Department of Arts, Sports, Environment, Tourism & Territories*  
Dr C D Woodroffe  
Sea Level Vulnerability of Cocos Islands \$19,862

*National Greenhouse Advisory Council*  
Dr C D Woodroffe  
NGAC Coastal Group \$4,500

## Geology

*University Research Grant*  
Dr C Fergusson  
Geological Evolution of the Tasmanides \$20,000

*University Research Grant*  
Dr A C Hutton  
Fossil Fuels Program \$33,000

## Physics

*University Research Grant*  
Professor P Fisher  
Fundamental Properties of Semiconductors \$39,000

*University Research Grant*  
Mr G Moore  
Astronomy & Astrophysics No 3 \$3,500

*University Research Grant*  
Dr P Nulsen  
Astronomy & Astrophysics No 2 \$3,500

*University Research Grant*  
Associate Professor W Zealey  
Astronomy & Astrophysics No 1 \$6,500

*Australian Institute of Nuclear Science & Engineering*  
Dr J N Mathur  
Calculation and Measurement of a Hifar Filtered  
Neutron Beam for Neutron Capture Therapy \$5,500

## Centres

### Centre for Advanced Manufacturing and Industrial Automation

*NSW Education and Training Foundation*  
Mr H Chapman  
Internal Auditing Program for the Mining  
Industry \$6,750

### Centre for Multicultural Studies

*Bureau of Immigration Research*  
Dr R Iredale  
Refugees in the Australian Labour Market \$45,735

*Department of Arts, Sport, The Environment and Territories*  
Mr M Morrissey  
Survey of the Character of Ethnic  
Newspapers \$24,586

*Department of Immigration, Local  
Government & Ethnic Affairs*  
Dr R Iredale  
Review of National Accreditation  
Authority for Translators and Interpreters \$15,550

*Department of Immigration, Local  
Government & Ethnic Affairs*  
Dr R Iredale  
Serial Sponsorship \$30,000

*Office of Multicultural Affairs*  
Mr M Morrissey  
Evaluation of Commonwealth  
Governments Community Relations  
Strategy \$59,848

*Office of Multicultural Affairs*  
Professor S Castles  
Access to Excellence - Review of Issues  
Affecting Artists and Arts from Non-  
English Speaking Background \$103,720

*Office of Local Government*  
Mr M Morrissey  
Evaluation of Community Relations  
Program \$28,665

### **Centre for Research Policy**

*Australian Vice-Chancellors Committee*  
Professor S Hill  
Review of Infrastructure Within Australian  
Universities \$9,250

### **Key Centre for Mines**

*Coal Research, Development and  
Demonstration*  
Dr N Aziz  
Electrostatic Enhancement of Water Sprays for  
Coal Dust Suppression \$84,814



# STUDENT SERVICES

## Accommodation

**T**HE UNIVERSITY has five residential complexes which provided places for 974 students in 1992.

### *Collegiate Halls*

The University offered 421 collegiate-style places at International House and Weerona College in 1992. Refurbishment of facilities was high on the agenda for both of these older Halls and, by the year's end, progress had been made to upgrade facilities. Both halls demonstrated their usual high-level of communal spirit: a fine example at International House was the commitment by residents to building an eye care centre in Nepal in memory of one of their fellow students who died tragically during the year – the Dechen Dongala Memorial Eye Care Centre. The role of the residents is limited to raising funds to construct the building; equipping and staffing the Centre will be undertaken by a grant from another organization. Fund-raising activities undertaken during the second half of the year resulted in almost \$9,000 being raised. The initiative will continue until sufficient funds have been raised.

Fees in the collegiate sector continue to be at the lower end of the University catered accommodation range: \$135 per week for full room and board in a single room; \$110 per week for full room and board in a twin share room.

### *Non-Collegiate Accommodation*

In 1992 the three non-collegiate residential halls – Campus East, Kooloobong and Gundi – provided 553 places in contemporary surroundings. The philosophy of all non-collegiate residences is the development of 'independent' individuals who are both academically and socially competent.

Campus East was extended during 1992 to provide an additional 115 places. This increased the population to 320. There were 309 single students and eleven families in residence in 1992. The single students are catered for while the families cater for themselves. The occupation fee for single students was \$135. In-house programs offered to facilitate social development included public speaking, self defence and grooming for graduands. One of the main functions every year is an International Lunch. Students of all nationalities prepare their 'traditional' food and a concert follows.

Kooloobong accommodated 200 senior students in townhouse type dwellings. There were five residents in each house and they were responsible for their own cooking and cleaning. The residential fee was \$91 per week.

In 1992, 39 students had places in Gundi, a town house style dwelling. They were responsible for their own cooking and cleaning. Gundi is located centrally in Wollongong, an easy walk to the town centre and beaches. The residential fee was \$89.

### *Accommodation Service*

A register of private accommodation offered to University students was operated by the accommodation service. Offers of approximately 1000 places were received during the year. New members of staff and visiting academics had ten residences available to them in 1992: the amount of staff housing is adjusted according to demand. The University leases appropriate properties and sub-leases them to staff.



*One of three non-collegiate halls of residence, Kooloobong accommodated 200 senior students in comfortable townhouse-style dwellings in 1992. This view is of Stage 2 with, in the background, the Botanic Gardens and the city beyond*

## Counselling Service

PROMOTING student equity and the educational development of disadvantaged students continued to be a major focus of the Counselling Service. Networks for mature-age students, women in engineering and informatics and women in honours and postgraduate studies operated throughout the year. The Counselling Service co-ordinated various services for students with disabilities. Students are provided with note takers, transcription and interpreting facilities. A range of equipment for students with visual impairments was purchased and training systems for the use of this equipment were established. There was liaison with community and educational agencies; it is anticipated that the enrolment of students with visual disabilities will increase.

An important objective of the Counselling Service is to promote students' personal development and to prevent personal difficulties from interfering with study. Personal development programs were provided in the areas of leadership development, assertiveness training, self-confidence building and stress management. During 1992, 1,241

people sought personal counselling or welfare assistance for a total of 2,704 interviews.

Considerable assistance was provided to international students to help them with their cultural and educational adjustment to living and studying in Australia. An International Women's Group has been meeting for three years and continued to provide support, social activities and health and welfare assistance for students and partners of students and staff.

The Counselling Service also provided a wide range of orientation programs which were designed to help students adjust to university life and study through support and guidance from successful senior students. Programs were provided for recent school leavers, mature-age students, international students and postgraduate students.



## Dean of Students

**I**N APRIL 1992 a new Dean of Students took office under somewhat amended terms of reference. The most important task was the review of the undergraduate curriculum, which entailed detailed scrutiny of all subject offerings in order to remove from the books subjects no longer offered, to rationalise subjects offered at more than one level and to make sure that all subjects listed for offer have clearly stated teaching and learning objectives. As part of this process the Undergraduate Studies Committee, through the Dean of Students, asked all Units to submit statements of their academic objectives. These activities are an essential part of the drive for quality in teaching, initiated by the Federal Government to assure quality in higher education.

In 1992 all new subjects and existing 100-level subjects were reviewed. In 1993 the process will be extended to existing 200-level subjects; in 1994, 300 and 400-level. These reviews are part of the effort to create on this campus a more self-reflecting and flexible culture of teaching and learning.

## Learning Development Centre

**I**N 1992 the University recognised the vital importance of informed and ongoing student support by establishing a Learning Development Centre as an academic unit to provide academic and learning support to all students in need. The Centre aims to encourage genuine self-efficacy in each student, working towards autonomy for the student through growth in knowledge, skill and confidence. The Centre has provided a range of services involving the pre-university Gateway program and extending through undergraduate support to post-graduate development. The Gateway Program provides equity of study opportunity for students who, for good reason, have had difficulty in gaining university entry. The program is

concerned especially with mathematics awareness, effective literacy and oracy, sound techniques of university study, and a broad appreciation of the administrative structure and the diversity of the university environment. By the end of 1992, 360 students had participated in the program.

The Centre has liaised with University teaching departments, supporting the attainment of all relevant course objectives. This has involved the promotion of efficient techniques of task analysis with due attention paid to the presentation of rigorous argument and evidence with the formal precision appropriate to university study.

Other features of the services provided by the Centre include: ongoing learning support for students to ensure the most productive use of time and university resources; specialised support in speaking and writing for students whose first language is not English; integrated and co-ordinated workshops and lectures on request from course co-ordinators to supplement normal teaching; orientation and developmental presentations to heterogeneous groups such as mature students, overseas students, post-graduate students, nursing students, etc; in-service seminars for staff, including writing courses for general staff, pedagogic strategies for staff working with overseas post-graduate students, etc; seminars for external groups such as the New Enterprise Incentive Scheme, Telecom Managers, senior secondary school students.

There has been a constant and increasing demand for the services of the Learning Development Centre in line with the increasing numbers and the broadening diversity of university clientele.



*First woman Dean of Students, Josie Castle was formerly a senior lecturer in the Department of History and Politics; she is also the author of University of Wollongong: An illustrated History, 1951-1991*





Above: Sports-person of the Year  
was cricketer  
Anthony McGuire

Left: Clubperson of  
the Year, Dr Paul  
Webb; Cricket  
Club President  
Barry Reid; and  
Jodie McGuire,  
who won a colour  
for touch football



## Recreation and Sports Association

**T**HE ASSOCIATION had to exercise tight financial management in 1992, largely as a result of structural problems with the Olympic-size swimming pool. On the positive side, costs stabilised in other areas and increased usage, despite the problems, confirmed the Association's standing as the premier aquatic facility in the district. The success of the Aquatic Centre led to an increase in the level of activity in the Recreation Centre generally and the community use is now at capacity, with all programs filling quickly and casual use of every facility showing strong demand. The Aquatic Centre is operating at approximately 50 per cent community use and this is expected to increase over time.

Performance at Australian Universities' Championships has been very good with top efforts in soccer, tae kwon do and cricket. The men's soccer team won the AUC for the first time in our history, while the cricketers won the first-grade district final after losing in

the final in 1991. The two Rugby codes also performed well and are eagerly awaiting changerooms to be built on their oval to bring them up to required district standards.

Overall, 1992 was a year of financial tension, as the maintenance costs of the pool demanded that adjustments be made and that all other facilities operate at their maximum. The Association continues to operate on the lowest fee of any NSW University and 1993 capital projects, such as the relocation of the tennis courts and changerooms at the pool and ovals, will consolidate what is felt to be the most efficient, attractive and practical recreation facility of any university in Australia.

## Students' Association and Students' Representative Council (SRC)

**A** The year 1992 was one of steady consolidation and achievement by the SRC (which is the elected governing council of the Students' Association of the University



*The University water polo team work out in the Aquatic Centre pool*

of Wollongong). The SRC promotes the common interests of the members of the Association whose membership comprises all students enrolled at the University.

Students enjoyed many extra benefits as a result of the many free or low-cost facilities and services that the SRC provides directly or which are funded or part-funded through other units. Those services provided through or at the offices of the Association included interest-free, short-term loans available to all students in need; a free legal service provided weekly by the SRC's firm of solicitors; seeding grants and establishment assistance for – in 1992 – thirty-one affiliated clubs and societies; a comprehensive, widely-varied and well-patronised series of social functions, performance occasions, forums and debates, and a comprehensive range of free or low-cost computer facilities. The SRC also provides office assistance and funding (to the value of more than \$30,000, annually) to the University's Postgraduate Association including, in 1992, the donation of computer equipment to Postgraduate House.

Services for students funded (or part-funded) by the SRC but made available through other units included the funding of 'Student Plan' – a free insurance cover of up to \$1,000 per student; the funding of the wages of student tutors and tutorial services; and an ongoing grant to the University's child-minding service – 'Kid's Uni' – of more than \$20,000 in total in 1992. The SRC funded the appointment of a part-time counsellor in the University's Counselling Service in 1992, and donated computer equipment for the use of the University's International Students Adviser. The SRC also made a number of special purpose grants or funding contributions which supported, for example, the purchase for the University of special computer equipment for visually disabled students and the publication by the University's Environmental Society of a well-received book of photographs of the wildlife and vegetation of the Southern Highlands of New South Wales.

In 1992, the present SRC began publication of a totally revised and revamped University newspaper – *Tertangala* – on a fortnightly basis with a print-run (and readership) of 4-6,000 copies per issue.



This publication, which is produced in news-magazine style, has rapidly gained wide respect and admiration in the University and wider community. The SRC also produces a wide variety of other free publications and pamphlets of special interest to students including, for example, the Student Discount Booklet, the Disabled Students' Handbook, and – in 1993 – a new, 144 page Counter Calendar.

New services introduced in 1992 included the appointment by the SRC of a second, full-time administrative secretary and the appointment of a 'casual employment administrator' – a service particularly appreciated and well-patronised by students. The SRC also appointed a 'Research Officer' with responsibility for co-ordinating a series of full-scale reviews of the academic and other services provided by Faculties. The results of the first two of these survey/reviews (of the Faculties of Informatics, and Law) are scheduled for release in early 1993.

During the year the SRC actively pursued its roles as 'consumer watchdog' for students, as a focus for student concerns and as the promoter of student involvement in the governance of the University at all levels. In doing this, it was committed to maintaining and enhancing the reputation and standing of the University of Wollongong as an educational institution of excellence.

The SRC instituted in 1992 a deliberate policy of improving its links to and contacts with the Executive of the University and of the Faculties and, wherever possible, negotiating agreements and resolutions to problems in a non-confrontational style. It also advised and encouraged students who wished to become or were involved in University and faculty/departmental committees at all levels. Members of the SRC themselves became members of all of the major policy-making or advisory committees to which student-membership was available. As a result, the level of regard for and a credibility in the contribution that students can make to the University's governance has developed and continues to grow.

## University Union

THE MISSION of the University of Wollongong Union is to provide a community centre for the University, incorporating a range of services, facilities and programs to enhance the intellectual, social and cultural development of students and staff of the University.

The highlights of the 1992 calendar year included:

### *1. Completion of Stage 6 of the University Union including:*

#### • **Union Retail Centre**

The Union Retail Centre, incorporating the operations of the former Union Mini Market and the new Union Bookshop commenced operations early in February 1992. The Retail Centre met with unprecedented demand from students and staff who responded favourably to the spacious new surrounds and to an increase in the range of offerings. The Retail Centre incorporates a wide range of retailing activities including academic textbooks and general reading, a special book order service, a full newsagency, a post office and Commonwealth Bank agency, stationery, confectionery, grocery and household items, gift lines, dairy products and cold drinks.

The Union Bookshop offers a genuine 20% discount from recommended retail price on textbooks at the beginning of each session, the result being that textbooks at the University of Wollongong are the cheapest in Australia.

#### • **Union Conference and Function Centre**

The Union Conference and Function Centre on level 2 of Stage 6 of the Union incorporates 450m<sup>2</sup> of flexible conference and meeting room space with adjacent modern kitchen facilities. The Conference and Function Centre features a full length covered deck for outdoor activities and a pleasing modern decor. Opened in early February 1992, the Conference and Function Centre was



heavily booked throughout the year.

#### • University Student Support Services

The University completed the fitout of level 3 of stage 6 in August and that level incorporates the Careers and Appointments Service, the University Counselling Service, the Office of Development and Community Affairs, the Dean of Students and other student support services.

**Stage 6 of the Union was built without government financial support at a cost to the Union of \$4 million and a cost to the University of \$800,000.**

#### 2. Commencement of the Keira View Project

Unfortunately for the Union it was necessary to demolish the Greenery, a Union catering facility, to make way for the Keira View Project. The loss of this catering facility at the western end of the campus made it necessary for the Union to engage a temporary mobile food service to meet the demands of that end of the campus. However, the Union is confident that the completion of the Keira View Project early in 1994 will see the Union much better provided for in terms of catering, and other social and cultural amenities at the western end of the campus.

#### 3. Refurbishment of Union Hall

Refurbishment of the Union Hall commenced in July 1992, with the result that the Union lost a valuable facility for spring and summer sessions 1992. The refurbished Union Hall will provide the University with a quality Graduation venue, which will be suitable for a large number of other ceremonial functions. It will also be a venue suitable for examinations, exhibitions and conventions, cinema



and other types of musical concerts. The Union is contributing \$500,000 to this project.

#### 4. Child Care

There are now 224 families on the waiting list for child care for 1993. During 1992 the Union increased the number of places in the Family Day Care Scheme from 25 to 50. In addition, the Union has negotiated with the University and with relevant authorities to upgrade the existing Child Care Centre at an estimated cost of some \$200,000. There is an urgent need to expand the number of child care places on campus.

*New entrance to the University Union from Northfields Avenue, with Union Stage 6 visible in the background*

## ADMINISTRATION

**I**N 1992 the University's Administration made significant advances in streamlining processes and in identifying the needs of 'clients'. Continuing activities were supplemented by new projects undertaken by the Executive and the Branches. Projects included a number of major buildings and support for the rigorous planning exercise that resulted in the TOWARDS 2000 planning document.

The Administrative structure changed slightly to bring together the former Academic Services and Student Services Branches under one Manager, thus rationalising the administration of undergraduate and postgraduate student matters and allowing for cross-fertilisation between policy and implementation areas.

The executive structure (shown diagrammatically on page 12) thus ended the year supported by six (in place of seven) administrative branches each headed by a Manager or Director.

*Academic and Student Services* – research and postgraduate student administration, undergraduate student matters, student counselling, careers and appointments, accommodation, secretariat support and ceremonial matters;

*Buildings and Grounds* – physical planning, design and construction of buildings, site services and maintenance and property maintenance;

*Financial Services* – budgetary and accounting services, business and office services, the Printery, parking and transport, cleaning and campus security;

*International Office* – promotion of the University overseas and the recruitment of international students;

*Personnel Services* – academic and general staff recruitment and employment conditions, administration of salaries and benefits, employee relations and occupational health and safety;

*Planning and Marketing* – planning and statistics, marketing, media liaison, publications and school liaison; and

*Administrative Information Services Unit* – development, maintenance and operation of computer systems for administrative information.

Major activities undertaken within the Administration during 1992 included:

- a review of security completed in June resulted in the appointment of a security manager to supervise operations and implement reforms. Action was taken to implement some of the other recommendations of the review, particularly in the areas of training security staff, education of campus users, review of equipment and establishment of security policies and standard operating procedures;
- despite external competition engendered by the recession, the Printery continued to achieve or surpass budget expectations. The purchase of an additional two-colour machine together with other equipment enhanced the quality of work produced and the response rate to growing campus needs;
- the merger of records administration with the mail room in March resulted in a more efficient mail service. Commitment to improve and enhance the services provided to campus by Office Services continued, for example, the implementation of a recycling program supported by the SRC, the extension of bus services provided by local operators, and a review of waste management as well as improvements to existing services;
- Financial Services also undertook a program of campus education during the year through the provision of numerous brochures and seminars including a brochure for departments and new employees detailing services provided by Financial Services, insurance brochures, *Where the Dollars Go* brochure, insurance seminars and a devolution seminar for non-faculty units;
- Financial Services overall met significantly increased workloads, e.g., number of creditors, payment increased by 32 per cent from 23,000 in 1991 to 30,500 in 1992;
- a review of a range of policies linked to Academic Award restructuring outcomes was conducted;
- achievement of employment targets for persons with disabilities set jointly by Essential Personnel, the Australian Liquor, Hospitality and Miscellaneous Workers' Union, and the University. Staff in the Cleaning Area contributed





October 1992: one of the last of the Graduation ceremonies to be held in the Sports Hall – in the absence of a Great Hall a 'temporary' venue for several years, housing increasing numbers of graduates. Completion of the Union Hall in 1993 will bring about a welcome improvement in space and comfort for graduands and their families

significantly to the success of this project which culminated in the receipt of a Prime Minister's Certificate of Commendation in the Employer of the Year Awards;

- specification of a new computerised Personnel/Payroll system;
- movement of General Staff Award Restructuring negotiations from the federal arena to a University level. A single bargaining unit has been established and negotiations are well advanced;
- review of academic salary policy including attraction and retention allowances;
- the opening of a new General Purpose Science Building and additional student accommodation;
- reviews of the Departments of (1) Biology, (2) Human Movement Science and (3) Science and Technology Studies, in accordance with the

University's policy of evaluating Departments' current activities and planning for their future development. The first two reviews resulted in a name change to reflect expanded boundaries for each Department's development: Biology became the Department of Biological Sciences and Human Movement Science became the Department of Biomedical Sciences;

- the merging of two branches into Academic and Student Services saw the beginnings of a planned interlinking of policy and practice areas, the rationalisation of processes and the simplification of policy processes; and,
- considerable effort was expended by all staff in reviewing the current computer system preparing specifications for a new system and reviewing some of the systems tendered.



## BUILDINGS AND SITE DEVELOPMENT

**I**N 1992 the University was in the midst of a major building program designed to meet the continuing need for additional space. In January, the \$7.2m Commonwealth Government-funded General Science Building was occupied. This building has provided much needed larger and additional teaching laboratories for the Faculty of Science.

Construction continued on a new \$13.1m general purpose building, over \$11m of the project cost being provided by the Commonwealth Government. This building, which replaces several old demountable buildings will, when completed at the end of 1993, provide additional Union facilities, two large lecture theatres and other teaching areas plus additional space for the Faculty of Law and Faculty of Education.

Additional student accommodation costing \$3m was completed and available for occupation from the start of the 1992 academic year. The Commonwealth Government provided \$500,000 towards the cost of this project.

During 1992 the Commonwealth Government announced it would be providing \$2m towards a \$4m refurbishment of the University's main lecture theatre complex which will incorporate 'state of the art' multi-media teaching aids and improved levels of comfort. The project will also include a multi-media open learning laboratory. Stage 1 of the project will be completed by the end of February, 1993 and Stage 2 will be completed in July, 1993.

Commonwealth Government funds are also being provided towards the cost of upgrading the Union Hall to increase its capacity from 430 to 1,000 seats and provide improved facilities for a wide range of functions. The government's contribution is \$1.6m of the total project cost of \$3.7m. The work, which commenced in June 1992 is scheduled for completion in April, 1993.

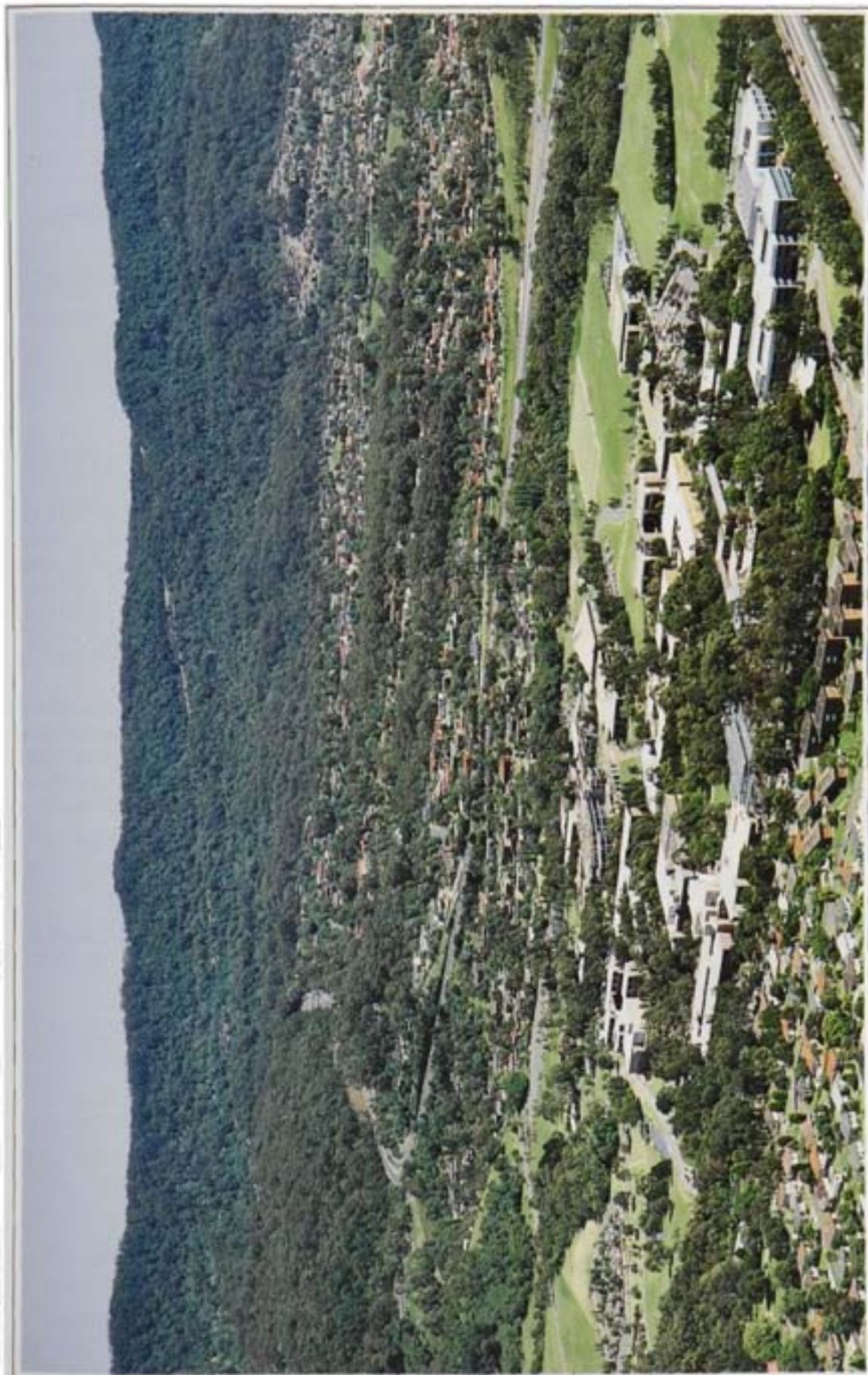
Further Commonwealth funding is being provided for the refurbishing of existing space and the provision of additional space for the Faculty of Engineering. Funds of \$2.5m are being provided towards the total project cost of \$2.870m. This work commenced in November, 1992 and is due for completion in June, 1993.

*Other major projects undertaken during the year include:*

- A new High Bay Laboratory for the Department of Civil and Mining Engineering at a cost of \$270,000 funded by the University.
- A facility to provide quality accommodation for visitors to the University. This \$500,000 project, funded by the University, commenced in October, 1992 with completion expected in April, 1993.
- A two-level building extension to provide additional studio and office space for the School of Creative Arts, the project to cost \$370,000 from University sources.
- Additional student accommodation (50 places) at Campus East. The project cost of \$1.5m was funded by a loan and serviced from the rental income. Construction commenced in June, 1992 for completion in January, 1993.
- Completion of an extension to the Union Building complex to provide a retail outlet, new function rooms and multi-purpose office space. The \$2.7m project was funded from University Union sources and fully completed in August, 1992.
- Additional facilities to service the expanding student accommodation complex at Campus East. The project costing \$550,000 was funded by the University.
- Building extensions to the University Child Care facility. This project costing \$177,000 commenced in November 1992 and is scheduled for completion in April, 1993.
- Alterations to provide additional office space for the Faculty of Informatics at a cost of \$187,000.
- Purchase of four off-campus properties from the Department of Housing to provide additional office accommodation. Total purchase price of \$485,000.
- Purchase of land adjacent to the University at a cost of \$200,000.

During 1992 the University also progressed the planning of a new building for Health Sciences in anticipation of capital funding becoming available.





*The University of Wellington campus — a bird's eye view*



## Summary of Commonwealth Government Grants

### Major Projects

#### General Purpose Building (Keira View Building 67)

- total project cost \$13.0m (\$11.0m from Commonwealth Government)
- 1992 grant \$5.5m

#### Refurbishment and expansion of Union Hall

- total project cost \$3.7m (\$1.6m from Commonwealth Government)

#### Engineering Building refurbishment and extension

- total project cost \$2.9m (\$2.5m from Commonwealth Government in 1993)

#### Refurbishment and extension of Lecture Theatre Complex (MOLAB)

- total project cost \$4.0m (\$2.0m from Commonwealth Government in 1993)

### Minor Building and Site Development Projects

- High bay laboratory extension to Building 3 for Department of Civil and Mining Engineering \$65,000
- Alterations to existing Faculty of Science space in Buildings 15, 18 and 35 following occupation of new General Science Building \$183,500
- Alterations to Buildings 21 and 22 to accommodate changing needs of the Faculty of Education \$25,300
- Alterations to Building 29 to provide additional space for the Centre for Research Policy \$27,300
- Upgrading of plumbing in Building 18 (Science) to comply with changes in legislation relating to laboratory safety \$12,000
- Alterations in Building 39 (Technology) to provide additional space for Faculty of Informatics \$65,000
- Underpinning of foundations in Recreation and Sports Centre Building \$25,000
- Repainting of road markings on main Ring Road (safety issue) \$4,550
- Upgrade of fire extinguishers to comply with new legislation \$12,000
- Part funding of building extensions for School of Creative Arts (Total cost \$200,000) \$80,000
- Part funding of new electrical sub-station to service new buildings (Total cost \$250,000) \$46,000
- Provision of external sign for Hope Theatre \$7,500

- Additional external campus lighting (safety issue) \$19,000
- Project Controller's salary on-costs \$50,000
- TOTAL \$622,150**

## University Land

### Main Campus

Lot 210 DP 801683

City of Wollongong, Parish of Wollongong, County of Camden

Area : 82.04 ha

Land Use : University buildings, education and research.

Land Value : \$4,400,000 (VG)

### LOT 223 DP 826710

City of Wollongong, Parish of Woonona, County of Camden.

Area : 3636 sq m

Land Use : Portion of land on northern boundary and part of Main Campus. Purchased in 1992.

Land Value : Purchase Price 1992 \$200,000.

### Campus East - Cowper St./ Squires Way, Fairy Meadow

(Purchased 1987)

Lot 1 DP 719865

Parish of Woonona, County of Camden

Folio Identifier 1/719865

Area : 12.02ha

Land Use : Student Residential, education, research, buildings and grounds maintenance.

Land Value : \$1,100,000 (VG)

### 11 Cowper Street (part of Campus East)

Part Lot 1 DP 719865

Area: 834.7 sq m

Land Use : Residential.

Land Value: \$75,000 (VG)

Squires Way (adjoins Campus East)

Owned jointly with Wollongong City Council

### Lot 1 DP 633347

Area: 1.21 ha

Land Use : Vacant

Land Value : \$190,000 (Uni. share \$95,000 based on 1989 purchase price.)

## Other off-campus property

### International House (Bldg 112)

Hindmarsh Ave, Gwynneville.

Lot 41 DP 546239 Vol. 11543 Fol. 188

Lot 42 DP 546239 Vol. 11543 Fol. 189

Lot 1 DP 546474 Vol. 11619 Fol. 167

Lot 13 DP 585083 Vol. 13585 Fol. 56

City of Wollongong County of Camden.

Area : 1.2 ha

Land Use : Student Residential

Land Value : \$150,000 (VG)

(Purchased 1979)



*Weerona (Bldg 108)*

Foley St, Gwynneville.

Part Lot B DP 160926

Conveyance Book N# 753 (residue)

Area : 1.171 ha

Land Use : Student Residential.

Land Value : \$1,150,000(VG)

(Purchased 1987)

*2 Parrish Avenue, Mount Ousley, (Bldg 109)*

Lot 17 DP 24098

Area : 0.2023 ha

Land Use : Vice Chancellor's Residence.

Land Value : \$150,000(VG)

*Porter Street, Gwynneville, (Bldg 101)*

Certificate of Title Reg. Book N# Vol. 4945 Fol. 128

Area : 882 sq m

Land Use : Education/Research

Land Value : \$100,000(VG)

45 Northfields Avenue, (Bldg 113)

*Lot 8 DP 36218*

City of Wollongong County of Camden

Area : 583 sq m

Land Use : Education/Research

Land Value : \$44,000

(Purchased 1992)

47 Northfields Avenue, (Bldg 114)

*Lot 7 DP 36218*

Area : 551 sq m

Land Use : Education/Research

Land Value : \$44,000

(Purchased 1992)

*49 Northfields Avenue, (Bldg 115)*

Lot 6 DP 36218 Vol. 13318 Fol. 14

Area : 525 sq m

Land Use : Education/Research

Land Value : \$44,000(VG)

(Purchased 1985)

*51 Northfields Avenue, (Bldg 116)*

Lot 5 DP 36218 Vol. 18720 Fol. 37

Area : 548 sq m

Land Use : Education/Research

Land Value : \$44,000(VG)

(Purchased 1985)

*53 Northfields Avenue, (Bldg 117)*

Lot 4 DP 36218 Vol. 11209 Fol. 17

Area : 545 sq m

Land Use : Education/Research

Land Value : \$44,000(VG)

(Purchased 1983)

*55 Northfields Avenue, (Bldg 118)*

Lot 3 DP 36218 Vol. 13318 Vol. 13

Area : 575 sq m

Land Use : Education/Research

Land Value : \$44,000(VG)

(Purchased 1983)

*57 Northfields Avenue, (Bldg 119)*

Lot 2 DP 36218

Area : 592 sq m

Land Use : Child Care Facility(proposed)

Land Value : \$44,000

(Purchased 1992)

*59 Northfields Avenue, (Bldg 120)*

Lot 1 DP 36218

Area : 633 sq m

Land Use : Education/Research

Land Value : \$44,000

(Purchased 1992)

*18 Madeline Street, (Bldg 106)*

Lot 14 DP 36215 Vol. 13330 Fol. 166

Area : 668 sq m

Land Use : Education/Research

Land Value : \$49,000(VG)

(Purchased 1986)

Leased Properties

*GLENIFFER BRAE - cnr Murphys Lane,  
Robsons Rd. & Northfields Ave.(Bldg 107)*

Used by School of Creative Arts and

Conservatorium of Music.

Leased from Wollongong City Council.

*GUNDI, Marr St. Wollongong (Bldg 111)*

Used for student residential accommodation.

Leased from Marksman Homes Pty Ltd.

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# **Appendix 1**

## **Statistical and General Information**

# COUNCIL 1992

## ATTENDANCES

	Possible	Attended	Apology/ Leave		Possible	Attended	Apology/ Leave
<b>Ex-Officio</b>				<b>Elected by the full-time Academic Staff of the University</b>			
The Hon R M Hope	6	6		Dr M J Lowrey	6	6	
Professor K R McKinnon	6	5	1	Dr J R Panter	6	5	1
The Chairperson of the Academic Senate,				<b>Elected by the full-time General Staff of the University</b>			
(1) Professor H Gamble	3	1	2	(1) Mr R Parker	2	1	
(2) Professor B Conyngham	3	3		(2) Ms F McGregor	3	3	
<b>Elected by NSW Legislative Council</b>							
The Hon S Mutch, MLC	6	3	3				
<b>Elected by NSW Legislative Assembly</b>							
Mr C J Downey, MLA	6	4	2				
<b>Ministerial Nominees</b>							
Dr B S Gillett	6	6					
Ms S L Chapman	6	3	3				
Mr R J Oxley	6	5	1				
Mr G M Parker	6	3	3				
<b>Appointed by Council</b>							
Mr R D Somerville	6	6					
<b>Elected by the Students of the University</b>							
Mr C Barratt	6	5					
<b>Elected by Convocation</b>							
Rev Canon R E Heslehurst	6	6					
Ms S A Nixon	6	5	1				
Assoc Prof R W Upfold	6	5	1				
Dr W L Ward	6	6					



## PUBLICATIONS



**T**HE UNIVERSITY produces a rich store of widely diverse publications. Some, like the *Undergraduate and Postgraduate Calendars* and the *Prospectus* (of which 35,500 copies are printed), are banners sent out ahead of the academic year, heralding courses and timetables. So comprehensive is the *Undergraduate Calendar* that for 1992 it ran to some 800 pages.

Many gatefold and concertina-fold leaflets are produced by Faculties, Schools and Departments to promote their specific course offerings.

And recording the year's academic and administrative activities and financial statements are this one, the closely detailed *Annual Report*, and the *Research Report*.

The *Annual Report* is produced in accordance with Section 10(1) of the Annual Reports (Statutory Bodies) Act 1984, and Section 34 of the Public Finance and Audit Act, 1983.

The *Research Report* is not governed by an Act of Parliament. It is however no less detailed for that. Its tightly written textual information on the work of researchers involved in programs and projects, and its lists of research publications (the majority of them refereed), run to over 100,000 words. Each program description is backed up by pictures depicting researchers at work.

Most frequent of the University's publications is *Campus News*, an eight-page sheet which appears weekly during the academic year and for the first time a production continued throughout December and January 1993.

Published twice in 1992 was the *Wollongong Outlook*. This is an attractive well-designed 32-page publication produced by the Alumni Office with the aim of keeping graduates both in Australia and overseas in touch with their *alma mater*. The *Outlook* has a print run of over 15,500 copies.

# ACADEMIC PROMOTIONS

## Name

## Academic Unit

### *Promoted to Associate Professor*

Dr M Anshel	Human Movement Science
Dr N Aziz	Civil and Mining Engineering
Dr R Badham	Science and Technology Studies
Dr M Boyd	Civil and Mining Engineering
Dr M Metwally	Economics
Dr R Nilsen	Mathematics

### *Promoted to Senior Lecturer*

Dr D Brown	Psychology
Ms J Hammond	Education
Dr R Jayasuriya	Public Health and Nutrition
Dr N Mackay	Psychology
Mr G Moore	Physics
Dr P Nulsen	Physics
Ms L Tapsell	Public Health and Nutrition
Dr N Taylor	Human Movement Science
Dr J Wragg	Psychology
Ms H Yeatman	Public Health and Nutrition

## STUDY AND OVERSEAS CONFERENCE LEAVE IN EXCESS OF TWO WEEKS

### Faculty/Unit

### Member

### Principal Location

#### FACULTY OF ARTS

Creative Arts	Mr A J Chapple	UK
Creative Arts	Ms E Jeneid	Europe, US
English	Dr P Sharrad	India, Singapore
History & Politics	Dr M Beresford	Vietnam, Europe
Modern Languages	Dr S C Yates	France, US
Modern Languages	Professor B Moloney	UK, Italy
Philosophy	Dr H Beran	UK, Canada, US, Austria
Philosophy	Ms S M Dodds	Canada, Australia
Science & Technology Studies	Dr S Russell	UK, US
Sociology	Dr T Jagtenberg	Australia

#### FACULTY OF COMMERCE

Accountancy	Mr W N Funnell	UK
Accountancy	Dr H Wijewardena	Japan, Sri Lanka
Accountancy	Ms M A Kaidonis	France, UK, Canada
Business Systems	Dr L Shue	Taiwan
Business Systems	Mr R J Clarke	UK, Australia
Business Systems	Ms H M Hasan	US, Australia
Economics	Professor D E Lewis	US
Economics	Dr D T O'Brien	Indonesia, Phillipines, Thailand, Malaysia

Economics  
Economics  
Management  
Management

Associate Professor V Tran  
Associate Professor D P Chaudhri  
Mr C R Horne  
Mr N Masters

Belgium, Thailand  
India, UK, US  
Australia  
Singapore, UK, US

## FACULTY OF EDUCATION

Education  
Education  
Education  
China,  
Education  
Education  
Education

Professor R C King  
Dr E D Booth  
Associate Professor M M C Harris  
  
Associate Professor A R Smith  
Professor C Fasano  
Ms D M Konza

US  
Australia, Fiji, US  
Indonesia, Thailand, Vietnam,  
Hong Kong  
US, Hawaii  
US, UK  
US

## FACULTY OF ENGINEERING

Civil and Mining  
Civil and Mining  
Civil and Mining  
Civil and Mining  
Civil and Mining  
Materials Engineering  
Materials Engineering  
Mechanical Engineering  
Mechanical Engineering  
Mechanical Engineering

Associate Professor R N Chowdhury  
Associate Professor D G Montgomery  
Associate Professor M J Boyd  
Professor L C Schmidt  
Dr I Porter  
Professor N Standish  
Professor D P Dunne  
Dr W K Soh  
Dr A C Basu  
Dr P Cooper

Sri Lanka  
Turkey, Greece  
Australia  
UK, Europe  
US, UK  
Germany, Singapore  
US  
Korea, Singapore  
US, UK  
India, UK, US

## FACULTY OF HEALTH & BEHAVIOURAL SCIENCES

Nursing  
Nursing  
Nursing  
Nursing  
Nursing  
Public Health & Nutrition  
Public Health & Nutrition  
Psychology

Ms J K Duggan  
Ms J J Fares  
Mr W G Janes  
Mr P G Thomas  
Ms L B Newman  
Associate Professor R D Harris  
Ms M G Harris  
Dr J M De Wet

Australia  
US, Canada  
UK  
Fiji, Australia  
Australia  
US  
US  
UK, Australia

## FACULTY OF INFORMATICS

Computer Science  
Computer Science  
Electrical & Computer Engineering  
Electrical & Computer Engineering  
Electrical & Computer Engineering  
Electrical & Computer Engineering  
Mathematics

Mr P T Castle  
Mr G J Stafford  
Dr B S Perera  
Dr F Naghdy  
Dr G Naghdy  
Associate Professor V J Gosbell  
Dr C M Gulati

UK, US  
Canada  
Sri Lanka, UK  
US, Israel  
US, Israel  
UK, Europe  
Indonesia, Singapore, US, Japan

## FACULTY OF LAW

Law  
Law

Mr R P Handley  
Mr D J P Considine

Canada, UK  
Canada

## FACULTY OF SCIENCE

Chemistry  
Chemistry  
Chemistry  
Geography  
Geology  
Physics

Associate Professor R J W Truscott  
Dr S G Pyne  
Dr W E Price  
Dr C D Woodroffe  
Dr A C Hutton  
Professor P Fisher

Phillipines, China, Paris  
Germany  
UK  
NZ, Hawaii, Malaysia  
South Africa, Scotland, US  
Japan, China



# PRIZES

## Name of Prize Winner

## Name of Prize

### FACULTY OF ARTS

#### *Creative Arts*

Not determined

Cassie McCullagh

Des Davis Prize in Drama

Philip Larkin Prize

#### *English*

Danielle Voss

Aisling Society Prize

#### *History and Politics*

Stephen Ward

Mary Black Memorial Prize

Not determined

Australian Institute of Political Science Prize

Not determined

Jabinda Prize

Not determined

Australian Institute of International Affairs

#### *Philosophy*

Not determined

The Finnish Society Prize for Philosophy

### FACULTY OF COMMERCE

#### *Accountancy*

Jason Habak

Australian Society of Certified Practising Accountants Annual Prize (1)

Anita Menon

Australian Society of Certified Practising Accountants Annual Prize (2)

Stuart Laidlaw

Australian Society of Certified Practising Accountants Annual Prize (3)

David H Wilson

ATMA Prize for Management – Accountancy

Michael Damianopoulos

Coopers and Lybrand Prize for Advanced Auditing

Petra Krotz

KPMG Peat Marwick Chartered Accountants Prize for Business Finance I

Jason Habak

Orestis Trikas Prize for Accountancy and Management

#### *Business Systems*

Graham P Collier

Apple Award for Computer Applications

Scott G Harrison

Unisys Award for Business Systems Analysis

Mr Mau Fung Ho

Unisys Award for Graduate Diploma in Business Information Systems

#### *Economics*

Susan Sainty

) Awarded Jointly – The Hilda

Nichole Davidson

) Kirby Prize

Ron Johnson

The Eric Derra Young Industrial Relations Prize

Yasmin Rittau

Industrial Relations Society of New South Wales

#### *Management*

To be determined

The AIM Diploma in Management Prize

To be determined

The AIM Master of Business Administration Prize

Michael Geoffrey Brannon

The AIM Prize in Management Studies

J S Gan

Friends Prize for Management Studies

To be determined

National Safety Council of Australia

### FACULTY OF ENGINEERING

#### *Civil Engineering*

Yao Bao Zhong

Peter Schmidt Scholarship

#### *Materials Engineering*

Shared Prize:

Risman Robin Cornelius

) Australian Institute of Mining

Bryan Andres Shedden

) and Metallurgy (Illawarra Branch)

) Materials Prize

Jari Peter Hyvarinen

BHP Colorbond Materials Prize

David John Langley	BHP Steel Slab and Plate Products Division
Sandra Michele Leigh	Commonwealth Banking Corporation
Jari Peter Hyvarinen	Institute of Metals and Materials Australasia (Wollongong Branch)
1. Sandra Michele Leigh	)
2. David John Langley	) Metal Manufactures Prize
3. David John Langley	)
<i>Mechanical Engineering</i>	
Kevin Fish	Sam Marshall Prize
<i>Mining Engineering</i>	
Scott Alexander Graham	Western Mining (Best Thesis)
David Webb	Western Mining (Best Academic Record)
Charles Richard Goldsmith	Australian Institute of Mining and Metallurgy
Dean Sorley	Joint Coal Board
Lip Hen Teh	Joint Coal Board
David Webb	Joint Coal Board
Mark Johnston	Elizabeth Tague Prize
Jose Gonzalez	Metal Building Products Manufacturers Association

## FACULTY OF HEALTH AND BEHAVIOURAL SCIENCES

<i>Nursing</i>	
John Percival	Mt Warrigal Retirement Village Ltd Prize
<i>Psychology</i>	
Not awarded in 1992	The Australian Psychological Society Prize in Psychology

## FACULTY OF INFORMATICS

<i>Electrical and Computer Engineering</i>	
Tony Liu	Staff Prize for Final Year Thesis
Weerasinghe Arachchige	Electrical Supply Engineers' Association of NSW Award
Chaminda Perera	Electrical Supply Engineers' Association of NSW Award
Weerasinghe Arachchige	Institution of Electrical Engineers Award
Chaminda Perera	Institution of Electrical Engineers Award
Gordon John Bradley	Institution of Electrical Engineers, UK, Award
Graham Ian Denney	Institution of Engineers, Australia Electrical College Award
<i>Mathematics</i>	
Wai Lok Lo	) The Austin Keane
Grant Moule	) Memorial Prize
Not awarded in 1992	The Austin Keane Vacation Scholarship
Virginia Wheway	William Sealy Gosset
Virginia Wheway	SA Senior Prize
Rodney Venn	Statistical Society of Australia (NSW Branch) Prize

## FACULTY OF LAW

Peter Corkish	)
Sharon Miskell	)
Mimma Barila	)
Lani Blackman	)
Alison Murphy	)
Silke Koernicke	) Butterworths Pty Limited Law
Craig Borg	) Publishers Book Prize
Zoe Neilsen	)
Rachel Phelan	)
Arvind Mathur	)
Kellie Oldfield	)

Jasan Habak	)
Sinead Campbell	)
Sean Bilkey	)
Steve Borrow	)
Andrew Tootell	)
Avalynne Wilby	)
Melinda Upton	)
Belinda Tobin	) Butterworths Pty Limited Law
Priscilla Davies	) Publishers Book Prize
Christopher Williams	The ATMA Prize for Taxation Law and Practice
Joe Habak	Australian Securities Commission Prize

## FACULTY OF SCIENCE

Susan M Hunt	The Gina Savage Prize
Paula Madden	The Biology Prize
Susan M Hunt	Bert Halpern Prize in Chemistry
Ninette S McDougall	Peter Beckmann Memorial Prize
Federico Turatti	G W Daniels Memorial Prize
William H Glover	The Australasian Institute of Mining and Metallurgy (Illawarra Branch) Geology Prize
Troy Gill	The A J & I Waters Prize in Geology
Maxine Matatko	The Foundation Prize in Geology
Eleanor Hannah	The Evan Phillips Prize in Geology
Troy Gill	) The CRAE Mapping Prize
Andrew Penkethman	) in Geology
Agus Pujobroto	The BP Steel Collieries Prize in Coal Geology
Troy Gill	The Geological Society of Australia (NSW Division) Prize in Geology
Troy Gill	The CRAE Ore Deposits Prize
William H Glover	The Prospectors Supplies Pty Ltd Prize in Geology
Trevor Van Steenberg	Ian R McDonald Prize in Geology
Janet Bartolo	Merit Award in Geology
Duncan J Fisher	The Australian Institute of Physics (NSW Branch) Prize in Physics
Judith E Bunder	Staff Prize in First Year Physics
Sean M Stewart	Staff Prize in Second Year Physics
Duncan J Fisher	Staff Prize in Third Year Physics
Not awarded in 1992	Staff Prize in Honours Year Physics



Table 1

## ENROLMENTS IN UNIVERSITY COURSES 1992

By Course Type, Sex and Attendance Mode

DOCTOR OF PHILOSOPHY	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Faculty of Arts</b>												
Creative Arts	—	2	2	4	3	7	—	—	—	4	5	9
English	—	7	7	2	3	5	—	—	—	2	10	12
History & Politics	3	4	7	2	—	2	—	—	—	5	4	9
Journalism	1	—	1	2	—	2	—	—	—	3	—	3
Languages	2	—	2	—	—	—	—	—	—	2	—	2
Multicultural Studies	—	1	1	—	—	—	—	—	—	—	1	1
Philosophy	—	—	—	1	1	2	—	—	—	1	1	2
Sociology	3	3	6	—	3	3	—	—	—	3	6	9
STS	3	2	5	6	3	9	—	—	—	9	5	14
<b>Total</b>	<b>12</b>	<b>19</b>	<b>31</b>	<b>17</b>	<b>13</b>	<b>30</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>29</b>	<b>32</b>	<b>61</b>
<b>Faculty of Commerce</b>												
Accountancy	10	—	10	6	3	9	—	—	—	16	3	19
Business Systems	2	—	2	3	—	3	—	—	—	5	—	5
Economics	6	2	8	2	—	2	—	—	—	8	2	10
Management	4	—	4	8	4	12	—	—	—	12	4	16
<b>Total</b>	<b>22</b>	<b>2</b>	<b>24</b>	<b>19</b>	<b>7</b>	<b>26</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>41</b>	<b>9</b>	<b>50</b>
<b>Faculty of Education</b>												
<b>Total</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>12</b>	<b>13</b>	<b>25</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>13</b>	<b>16</b>	<b>29</b>
<b>Faculty of Engineering</b>												
Civil and Mining Engineering	26	—	26	3	1	4	—	—	—	29	1	30
Materials Engineering	12	1	13	2	1	3	—	—	—	14	2	16
Mechanical Engineering	13	—	13	2	—	2	—	—	—	15	—	15
<b>Total</b>	<b>51</b>	<b>1</b>	<b>52</b>	<b>7</b>	<b>2</b>	<b>9</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>58</b>	<b>3</b>	<b>61</b>
<b>Faculty Hlth &amp; Behav. Sc.</b>												
Human Movement Science	3	1	6	2	—	2	—	—	—	7	1	8
Nursing	—	1	1	—	1	1	—	—	—	—	2	2
Psychology	6	5	11	2	7	9	—	—	—	8	12	20
Public Health and Nutrition	3	3	6	3	1	4	—	—	—	6	4	10
<b>Total</b>	<b>14</b>	<b>10</b>	<b>24</b>	<b>7</b>	<b>9</b>	<b>16</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>21</b>	<b>19</b>	<b>40</b>
<b>Faculty of Law</b>												
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>1</b>
<b>Faculty of Informatics</b>												
Computing Science	8	1	9	1	1	2	—	—	—	9	2	11
Elect. & Comp. Engineering	16	3	19	2	1	3	—	—	—	18	4	22
Information Tech. & Comm	—	—	—	—	1	1	—	—	—	—	1	1
Mathematics	2	2	4	3	—	3	—	—	—	5	2	7
<b>Total</b>	<b>26</b>	<b>6</b>	<b>32</b>	<b>6</b>	<b>3</b>	<b>9</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>32</b>	<b>9</b>	<b>41</b>
<b>Faculty of Science</b>												
Biology	8	8	16	3	—	3	—	—	—	11	8	19
Chemistry	17	3	20	4	—	4	—	—	—	21	3	24
Geography	3	1	4	—	1	1	—	—	—	3	2	5
Geology	16	—	16	3	—	3	—	—	—	19	—	19
Physics	5	—	5	6	2	8	—	—	—	11	2	13
<b>Total</b>	<b>49</b>	<b>12</b>	<b>61</b>	<b>16</b>	<b>3</b>	<b>19</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>65</b>	<b>13</b>	<b>78</b>
<b>Graduate Faculty</b>												
<b>Total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2</b>	<b>1</b>	<b>3</b>
<b>COURSE TYPE TOTAL</b>	<b>176</b>	<b>54</b>	<b>230</b>	<b>85</b>	<b>51</b>	<b>136</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>261</b>	<b>105</b>	<b>366</b>

DOCTORATES	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Faculty of Arts												
Creative Arts	10	5	15	21	6	27	—	—	—	31	11	42
Total	10	5	15	21	6	27	—	—	—	31	11	42
Faculty Hlth & Behav. Sc.												
Public Health & Nutrition	1	—	1	—	2	2	—	—	—	1	2	3
Total	1	—	1	—	2	2	—	—	—	1	2	3
COURSE TYPE TOTAL	11	5	16	21	8	29	—	—	—	32	13	45

MASTERS BY RESEARCH	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Faculty of Arts												
Creative Arts	5	4	9	1	—	1	—	—	—	6	4	10
English	—	4	4	—	1	1	—	—	—	—	5	5
History & Politics	—	1	1	1	—	1	—	—	—	1	1	2
Journalism	—	—	—	1	—	1	—	—	—	1	—	1
Philosophy	1	—	1	1	—	1	—	—	—	2	—	2
Sociology	1	—	1	—	1	1	—	—	—	1	1	2
Total	7	9	16	4	2	6	—	—	—	11	11	22
Faculty of Commerce												
Accountancy	1	1	2	2	1	3	—	—	—	3	2	5
Business Systems	—	—	—	1	—	1	—	—	—	1	—	1
Economics	1	—	1	2	—	2	—	—	—	3	—	3
Management	—	—	—	3	—	3	—	—	—	3	—	3
Total	2	1	3	8	1	9	—	—	—	10	2	12
Faculty of Education												
Total	2	1	3	6	5	11	—	—	—	8	6	14
Faculty of Engineering												
Civil and Mining Engineering	1	1	2	2	—	2	—	—	—	3	1	4
Materials Engineering	3	1	4	4	—	4	—	—	—	7	1	8
Mechanical Engineering	2	—	2	9	—	9	—	—	—	11	—	11
Total	6	2	8	15	—	15	—	—	—	21	2	23
Faculty Hlth & Behav. Sc.												
Human Movement Science	6	3	9	2	1	3	—	—	—	8	4	12
Nursing	1	2	3	2	5	7	—	—	—	3	7	10
Psychology	—	—	—	—	2	2	—	—	—	—	2	2
Public Health and Nutrition	—	1	1	3	5	8	—	—	—	3	6	9
Total	7	6	13	7	13	20	—	—	—	14	19	33
Faculty of Informatics												
Computing Science	1	—	1	—	—	—	—	—	—	1	—	1
Elect. & Comp. Engineering	7	1	8	—	—	—	—	—	—	7	1	8
Mathematics	1	—	1	—	—	—	—	—	—	1	—	1
Total	9	1	10	—	—	—	—	—	—	9	1	10
Faculty of Science												
Biology	—	—	—	2	2	4	—	—	—	2	2	4
Chemistry	—	—	—	2	1	3	—	—	—	2	1	3
Geography	1	—	1	1	2	3	—	—	—	2	2	4
Geology	3	1	4	—	—	—	—	—	—	3	1	4
Physics	—	—	—	1	—	1	—	—	—	1	—	1
Total	4	1	5	6	3	11	—	—	—	10	6	16
COURSE TYPE TOTAL	37	21	58	46	26	72	—	—	—	83	47	130

MASTERS BY COURSEWORK	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Faculty of Arts</b>												
Creative Arts	2	12	14	5	11	16	—	—	—	7	23	30
English	2	—	2	2	9	11	—	—	—	4	9	13
History and Politics	11	3	14	17	5	22	—	—	—	28	8	36
Journalism	6	11	17	16	25	41	—	—	—	22	36	58
Sociology	—	1	1	2	9	11	—	—	—	2	10	12
STS	4	1	5	2	1	3	—	—	—	6	2	8
<b>Total</b>	<b>25</b>	<b>28</b>	<b>53</b>	<b>44</b>	<b>60</b>	<b>104</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>69</b>	<b>88</b>	<b>157</b>
<b>Faculty of Commerce</b>												
Accountancy	9	3	12	11	6	17	—	—	—	20	9	29
Business Systems	28	11	39	34	8	42	—	—	—	62	19	81
Economics	11	2	13	10	3	13	—	—	—	21	5	26
Management	41	22	63	105	30	135	—	—	—	146	52	198
<b>Total</b>	<b>89</b>	<b>38</b>	<b>127</b>	<b>160</b>	<b>47</b>	<b>207</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>249</b>	<b>85</b>	<b>334</b>
<b>Faculty of Education</b>												
<b>Total</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>48</b>	<b>50</b>	<b>98</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>52</b>	<b>51</b>	<b>103</b>
<b>Faculty of Engineering</b>												
Civil and Mining Engineering	2	—	2	10	1	11	—	—	—	12	1	13
Materials Engineering	4	—	4	1	—	1	—	—	—	5	—	5
Mechanical Engineering	11	—	11	18	1	19	—	—	—	29	1	30
<b>Total</b>	<b>17</b>	<b>—</b>	<b>17</b>	<b>29</b>	<b>2</b>	<b>31</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>46</b>	<b>2</b>	<b>48</b>
<b>Faculty Hlth &amp; Behav. Sc.</b>												
Human Movement Science	2	8	10	—	—	—	—	—	—	2	8	10
Nursing	—	—	—	1	4	5	—	—	—	1	4	5
Psychology	3	6	9	8	14	22	—	—	—	11	20	31
Public Health and Nutrition	5	46	51	23	32	75	—	—	—	28	98	126
<b>Total</b>	<b>10</b>	<b>60</b>	<b>70</b>	<b>32</b>	<b>70</b>	<b>102</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>42</b>	<b>130</b>	<b>172</b>
<b>Faculty of Informatics</b>												
Computing Science	9	—	9	6	—	6	—	—	—	15	—	15
Elect. & Comp. Engineering	1	1	2	2	—	2	—	—	—	3	1	4
Information Tech. & Comm.	4	1	5	12	4	16	—	—	—	16	5	21
Mathematics	1	—	1	—	1	1	—	—	—	1	1	2
<b>Total</b>	<b>15</b>	<b>2</b>	<b>17</b>	<b>20</b>	<b>5</b>	<b>25</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>35</b>	<b>7</b>	<b>42</b>
<b>Graduate Faculty</b>												
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>1</b>
<b>Faculty of Science</b>												
Biology	—	—	—	1	1	2	—	—	—	1	1	2
Chemistry	1	1	2	1	1	2	—	—	—	2	2	4
Geography	1	—	1	—	—	—	—	—	—	1	—	1
Geology	1	—	1	7	1	8	—	—	—	8	1	9
<b>Total</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>9</b>	<b>3</b>	<b>12</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>12</b>	<b>4</b>	<b>16</b>
<b>COURSE TYPE TOTAL</b>	<b>163</b>	<b>130</b>	<b>293</b>	<b>343</b>	<b>237</b>	<b>580</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>506</b>	<b>367</b>	<b>873</b>



MASTERS—PRELIMINARY	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Faculty of Arts												
English	—	—	—	1	2	3	—	—	—	1	2	3
History and Politics	—	—	—	1	—	1	—	—	—	1	—	1
Journalism	—	2	2	3	1	4	—	—	—	3	3	6
Sociology	1	1	2	—	—	—	—	—	—	1	1	2
STS	3	2	5	3	2	7	—	—	—	8	4	12
Total	4	5	9	10	5	15	—	—	—	14	10	24
Faculty of Commerce												
Accountancy	2	—	2	2	2	4	—	—	—	4	2	6
Business Systems	—	—	—	1	—	1	—	—	—	1	—	1
Economics	2	2	4	2	2	4	—	—	—	4	4	8
Management	—	—	—	1	1	2	—	—	—	1	1	2
Total	4	2	6	6	5	11	—	—	—	10	7	17
Faculty of Education												
Total	—	—	—	1	2	3	—	—	—	1	2	3
Faculty of Engineering												
Civil and Mining Engineering	1	—	1	1	—	1	—	—	—	2	—	2
Materials Engineering	4	—	4	2	—	2	—	—	—	6	—	6
Mechanical Engineering	1	—	1	—	—	—	—	—	—	1	—	1
Total	6	—	6	3	—	3	—	—	—	9	—	9
Faculty Hlth & Behav. Sc.												
Human Movement Science	2	—	2	1	—	1	—	—	—	3	—	3
Psychology	—	—	—	5	19	24	—	—	—	5	19	24
Public Health and Nutrition	2	—	2	—	—	—	—	—	—	2	—	2
Total	4	—	4	6	19	25	—	—	—	10	19	29
Faculty of Informatics												
Computing Science	3	—	3	—	—	—	—	—	—	3	—	3
Information Tech. & Comm.	1	—	1	3	—	3	—	—	—	4	—	4
Mathematics	—	—	—	1	—	1	—	—	—	1	—	1
Total	4	—	4	4	—	4	—	—	—	8	—	8
Faculty of Law												
Total	—	—	—	2	1	3	—	—	—	2	1	3
Faculty of Science												
Biology	2	1	3	4	—	4	—	—	—	6	1	7
Chemistry	1	—	1	—	—	—	—	—	—	1	—	1
Geography	2	—	2	3	3	6	—	—	—	5	3	8
Geology	4	—	4	1	—	1	—	—	—	5	—	5
Physics	2	—	2	1	—	1	—	—	—	3	—	3
Total	11	1	12	9	3	12	—	—	—	20	4	24
COURSE TYPE TOTAL	33	8	41	41	35	76	—	—	—	74	43	117

POSTGRADUATE DIPLOMA	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Faculty of Arts</b>												
Languages	—	—	—	3	3	6	—	—	—	3	3	6
Philosophy	—	—	—	1	1	2	—	—	—	1	1	2
Sociology	2	—	2	—	—	—	—	—	—	2	—	2
STS	—	—	—	—	1	1	—	—	—	—	1	1
<b>Total</b>	<b>2</b>	<b>—</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>6</b>	<b>5</b>	<b>11</b>
<b>Faculty of Commerce</b>												
Accountancy	2	5	7	4	—	4	—	—	—	6	5	11
Business Systems	2	2	4	—	—	—	—	—	—	2	2	4
Economics	2	—	2	3	1	4	—	—	—	5	1	6
Management	9	1	10	47	25	72	—	—	—	56	26	82
<b>Total</b>	<b>15</b>	<b>8</b>	<b>23</b>	<b>54</b>	<b>26</b>	<b>80</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>69</b>	<b>34</b>	<b>103</b>
<b>Faculty of Education</b>												
<b>Total</b>	<b>34</b>	<b>64</b>	<b>98</b>	<b>12</b>	<b>27</b>	<b>39</b>	<b>17</b>	<b>10</b>	<b>27</b>	<b>63</b>	<b>101</b>	<b>164</b>
<b>Faculty of Engineering</b>												
Mechanical Engineering	4	1	5	68	9	77	—	—	—	72	10	82
<b>Total</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>68</b>	<b>9</b>	<b>77</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>72</b>	<b>10</b>	<b>82</b>
<b>Faculty Hlth &amp; Behav. Sc.</b>												
Human Movement Science	2	2	4	2	2	4	—	—	—	4	4	8
Nursing	—	—	—	1	17	18	—	—	—	1	17	18
Psychology	—	—	—	—	3	3	—	—	—	—	3	3
Public Health and Nutrition	3	7	10	31	71	102	—	—	—	34	78	112
<b>Total</b>	<b>5</b>	<b>9</b>	<b>14</b>	<b>34</b>	<b>93</b>	<b>127</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>39</b>	<b>102</b>	<b>141</b>
<b>Faculty of Informatics</b>												
Computing Science	7	1	8	21	4	25	—	—	—	28	5	33
Elect. & Comp. Engineering	7	—	7	2	—	2	—	—	—	9	—	9
<b>Total</b>	<b>14</b>	<b>1</b>	<b>15</b>	<b>23</b>	<b>4</b>	<b>27</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>37</b>	<b>5</b>	<b>42</b>
<b>Faculty of Law</b>												
<b>Total</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>32</b>	<b>11</b>	<b>43</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>35</b>	<b>12</b>	<b>47</b>
<b>Faculty of Science</b>												
Geography	—	—	—	1	—	1	—	—	—	1	—	1
Physics	—	—	—	—	1	1	—	—	—	—	1	1
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>Graduate Faculty</b>												
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3</b>	<b>—</b>	<b>3</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3</b>	<b>—</b>	<b>3</b>
<b>COURSE TYPE TOTAL</b>	<b>77</b>	<b>84</b>	<b>161</b>	<b>231</b>	<b>176</b>	<b>407</b>	<b>17</b>	<b>10</b>	<b>27</b>	<b>325</b>	<b>270</b>	<b>595</b>

BACHELOR DEGREE	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Faculty of Arts</b>												
BA	583	604	987	159	267	426	—	—	—	542	871	1413
BA(Hons)	11	32	43	4	13	17	—	—	—	15	45	60
BA/BCom (Japanese)	10	16	26	1	—	1	—	—	—	11	16	27
BCA	79	160	239	13	27	40	—	—	—	92	187	279
BCA(Hons)	4	7	11	—	—	—	—	—	—	4	7	11
<b>Total</b>	<b>487</b>	<b>819</b>	<b>1306</b>	<b>177</b>	<b>307</b>	<b>484</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>664</b>	<b>1126</b>	<b>1790</b>
<b>Faculty of Commerce</b>												
BCom	777	689	1466	263	206	469	—	—	—	1040	895	1935
BCom(Hons)	6	5	11	2	1	3	—	—	—	8	6	14
<b>Total</b>	<b>783</b>	<b>694</b>	<b>1477</b>	<b>265</b>	<b>207</b>	<b>472</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1048</b>	<b>901</b>	<b>1949</b>
<b>Faculty of Education</b>												
BEd-Phy/HlthEd	73	84	157	6	6	12	—	—	—	79	90	169
BEd(Primary)	12	32	44	—	—	—	—	—	—	12	32	44
BEd(Primary) Conversion	—	—	—	—	—	—	21	73	94	21	73	94
BEd(Prim)-Diploma	51	181	232	5	11	16	—	—	—	56	192	248
BEd(Primary)(Honours)	2	16	18	—	4	4	—	—	—	2	20	22
BEd(Prim) P/T Conv	—	—	—	12	54	66	—	—	—	12	54	66
BEd(Second)-(Hons)-Eng/Hist	1	2	3	—	—	—	—	—	—	1	2	3
BEd(Secondary)-Eng/Hist	12	15	27	1	1	2	—	—	—	13	16	29
BEd(Secondary)-Math	9	4	13	1	—	1	—	—	—	10	4	14
BEd(Secondary)-Science	4	—	4	—	1	1	—	—	—	4	1	5
BTeach(Early Childhood)	—	26	26	—	4	4	—	—	—	—	30	30
BTeach(Primary)	19	71	90	2	11	13	—	—	—	21	82	103
<b>Total</b>	<b>183</b>	<b>431</b>	<b>614</b>	<b>27</b>	<b>92</b>	<b>119</b>	<b>21</b>	<b>73</b>	<b>94</b>	<b>231</b>	<b>596</b>	<b>827</b>
<b>Faculty of Engineering</b>												
BE-Civil	184	19	203	77	4	81	—	—	—	261	23	284
BE-Civil-Mining	5	1	6	—	—	—	—	—	—	5	1	6
BE-Environmental	15	14	29	1	1	2	—	—	—	16	15	31
BE-Information	2	—	2	—	—	—	—	—	—	2	—	2
BE-Materials	53	21	74	45	13	58	—	—	—	98	34	132
BE-Mechanical	128	7	135	162	2	164	—	—	—	290	9	299
BE-Mining	41	2	43	15	1	14	—	—	—	54	3	57
BMech/BE	3	—	3	1	—	1	—	—	—	4	—	4
BE/BCom	9	—	9	—	—	—	—	—	—	9	—	9
BSc/BE	1	—	1	—	—	—	—	—	—	1	—	1
<b>Total</b>	<b>441</b>	<b>64</b>	<b>505</b>	<b>299</b>	<b>21</b>	<b>320</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>740</b>	<b>85</b>	<b>825</b>
<b>Faculty Hlth &amp; Behav. Sc.</b>												
BAppSci	7	6	13	2	3	5	—	—	—	9	9	18
BAppSci(Hons)	1	1	2	—	—	—	—	—	—	1	1	2
BNursing-Conversion	—	4	4	6	46	52	—	—	—	6	50	56
BNursing	51	222	273	4	17	21	—	—	—	55	239	294
BSc-Nutrition	11	70	81	2	8	10	—	—	—	13	78	91
<b>Total</b>	<b>70</b>	<b>303</b>	<b>373</b>	<b>14</b>	<b>74</b>	<b>88</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>84</b>	<b>327</b>	<b>411</b>
<b>Faculty of Informatics</b>												
BCompSci	184	53	237	74	25	99	—	—	—	258	78	336
BCompSci(Hons)	1	—	1	1	—	1	—	—	—	2	—	2
E-Computer	132	10	142	56	4	60	—	—	—	188	14	202
BE-Electrical	194	13	207	103	10	113	—	—	—	297	23	320
BInfoTechCom	84	84	168	36	13	49	—	—	—	120	97	217
BMech-Computing	31	6	37	41	8	49	—	—	—	72	14	86
BMech-Mathematics	57	53	110	19	5	24	—	—	—	76	58	134
BMech(Hons)	3	1	4	2	—	2	—	—	—	5	1	6
<b>Total</b>	<b>686</b>	<b>220</b>	<b>906</b>	<b>332</b>	<b>65</b>	<b>397</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1018</b>	<b>285</b>	<b>1303</b>
<b>Faculty of Law</b>												
Law	14	23	37	15	5	20	—	—	—	29	28	57
Arts/Law	9	25	34	4	—	4	—	—	—	13	25	38
Creative Arts/Law	—	4	4	—	—	—	—	—	—	—	4	4
Commerce/Law	21	20	41	1	1	2	—	—	—	22	21	43
Mathematics/Law	3	2	5	—	1	1	—	—	—	3	3	6
Science/Law	6	4	10	1	—	1	—	—	—	7	4	11
<b>Total</b>	<b>53</b>	<b>78</b>	<b>131</b>	<b>21</b>	<b>7</b>	<b>28</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>74</b>	<b>85</b>	<b>159</b>



BACHELOR DEGREE	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Faculty of Science</b>												
BBiotech	15	28	43	—	—	—	—	—	—	15	28	43
BEnvSci	75	65	140	18	6	24	—	—	—	93	71	164
BEnvSci(Hons)	1	1	2	1	1	2	—	—	—	2	2	4
BSc	290	307	597	65	64	129	—	—	—	355	371	726
BSc(Hons)	17	12	29	6	2	8	—	—	—	23	14	37
<b>Total</b>	<b>398</b>	<b>413</b>	<b>811</b>	<b>90</b>	<b>73</b>	<b>163</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>488</b>	<b>486</b>	<b>974</b>
<b>COURSE TYPE TOTAL</b>	<b>3101</b>	<b>3022</b>	<b>6123</b>	<b>1225</b>	<b>846</b>	<b>2071</b>	<b>21</b>	<b>73</b>	<b>94</b>	<b>4347</b>	<b>3941</b>	<b>8288</b>

DIPLOMA	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Faculty of Education</b>												
DipTeach(Sec)-Math	—	—	—	—	1	1	—	—	—	—	1	1
DipTeach(Primary)-Conversion	—	—	—	—	—	—	1	8	9	1	8	9
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>10</b>
<b>Faculty Hlth &amp; Behav. Sc.</b>												
DipAppSci(Nursing)	2	1	3	1	3	4	—	—	—	3	4	7
DipNurs	6	104	110	—	8	8	—	—	—	6	112	118
DipNurs-Conversion	—	—	—	—	18	18	—	—	—	—	18	18
<b>Total</b>	<b>8</b>	<b>105</b>	<b>113</b>	<b>1</b>	<b>29</b>	<b>30</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>9</b>	<b>134</b>	<b>143</b>
<b>COURSE TYPE TOTAL</b>	<b>8</b>	<b>105</b>	<b>113</b>	<b>1</b>	<b>30</b>	<b>31</b>	<b>1</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>143</b>	<b>153</b>

ASSOCIATE DIPLOMA	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Faculty of Commerce</b>												
AssocDipCompApplicns	85	42	127	72	30	102	—	—	—	157	72	229
AssocDipAdmin(Industrial)	—	—	—	2	—	2	—	—	—	2	—	2
<b>Total</b>	<b>85</b>	<b>42</b>	<b>127</b>	<b>74</b>	<b>30</b>	<b>104</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>159</b>	<b>72</b>	<b>231</b>
<b>COURSE TYPE TOTAL</b>	<b>85</b>	<b>42</b>	<b>127</b>	<b>74</b>	<b>30</b>	<b>104</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>159</b>	<b>72</b>	<b>231</b>

NON-AWARD	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Non-Award	—	—	—	24	23	47	—	—	—	24	23	47
Non-Award (Full Fee)	—	—	—	1	1	2	—	—	—	1	1	2
Non-Award (Exchange)	8	7	15	3	8	11	—	—	—	11	15	26
Non-Award (Study Abroad)	4	—	4	18	17	35	—	—	—	22	17	39
<b>COURSE TYPE TOTAL</b>	<b>12</b>	<b>7</b>	<b>19</b>	<b>46</b>	<b>49</b>	<b>95</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>58</b>	<b>56</b>	<b>114</b>

TOTAL UNIVERSITY ENROLMENTS	Full-Time			Part-Time			External			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	3703	3478	7181	2113	1488	3601	39	91	130	5855	5057	10912

# **Appendix 2**

## **University Finances**

# OPERATING BUDGET

## FOR FINANCIAL YEARS ENDING 31 DECEMBER

	1992 Approved Budget \$000s	1992 Amended Budget \$000s	1992 Actual \$000s	1993 Approved Budget \$000s
<b>INCOME</b>				
Commonwealth government grant (note 1)	60,943	65,848	65,845	67,572
State government grant – Nursing	2,885	3,104	3,104	2,842
State government grant – Conservatorium of Music	28	27	27	26
International student fees (note 2)	10,197	12,797	12,583	11,836
Miscellaneous	168	205	298	168
<b>Total income</b>	<u>74,221</u>	<u>81,981</u>	<u>81,857</u>	<u>82,444</u>
<b>EXPENDITURE (note 3)</b>				
<b>Academic Activities</b>				
Faculty of Arts	4,888	5,694	5,527	5,616
Faculty of Commerce	7,113	7,761	7,575	7,734
Faculty of Education	4,259	4,646	4,634	4,761
Faculty of Engineering	4,491	5,432	5,368	5,008
Faculty of Health and Behavioural Sciences	5,070	5,532	5,413	5,762
Faculty of Informatics	5,247	6,026	6,296	6,098
Faculty of Law	1,480	1,642	1,636	1,929
Faculty of Science	6,204	6,688	6,768	6,844
School of Creative Arts	1,680	1,934	1,918	1,913
Graduate Faculty	2,419	2,478	2,482	2,683
Aboriginal Education Centre	392	520	469	554
Scholarships and grants	211	188	191	376
Summer Session	210	285	318	376
Library	4,796	5,054	5,166	5,216
Centre for Staff Development	668	734	742	676
Information Technology Services	1,497	1,628	1,676	1,669
Learning Assistance (including External Studies)	408	383	453	421
Schools Link Project	–	30	30	75
Challenge Grants	150	219	220	150
Promotions and allowances	100	–	–	120
<b>Total Academic Activities</b>	<u>51,283</u>	<u>56,874</u>	<u>56,882</u>	<u>57,981</u>
<b>Student Services</b>				
Counselling	221	239	237	285
Careers and Appointments	95	97	102	97
Union	518	578	599	593
Sports Association	62	32	26	63
Other	157	129	14	18
<b>Total Student Services</b>	<u>1,053</u>	<u>1,075</u>	<u>978</u>	<u>1,056</u>
<b>Administration</b>				
Administration	5,751	6,351	6,403	6,189
International Students Office	2,124	1,473	1,527	1,687
<b>Total Administration</b>	<u>7,875</u>	<u>7,824</u>	<u>7,930</u>	<u>7,876</u>



	1992 Approved Budget \$000s	1992 Amended Budget \$000s	1992 Actual \$000s	1993 Approved Budget \$000s
<b>Overheads</b>				
Cleaning	1,534	1,618	1,467	1,594
Patrol	540	588	602	697
Buildings and Grounds	2,117	2,467	2,487	2,404
Other Overheads	4,214	4,195	3,889	4,676
<b>Total Overheads</b>	<u>8,405</u>	<u>8,868</u>	<u>8,445</u>	<u>9,371</u>
<b>Other Activities</b>				
Illawarra Technology Corporation	92	60	62	8
Alumni			—	92
Conservatorium of Music	116	116	119	120
Student Accommodation	3	4	4	18
Continuing Education	4	4	6	4
Friends	63	63	46	63
Campus Development	60	45	—	60
Co-operative Education	102	110	119	104
Equity Funds (note 1)	—	150	150	—
<b>Total Other Activities</b>	<u>440</u>	<u>552</u>	<u>506</u>	<u>469</u>
 Capital	 1,942	 2,962	 2,361	 2,367
Equipment	2,622	2,826	2,826	2,711
Minor Works (note 4)	601	1,000	1,000	613
<b>TOTAL EXPENDITURE</b>	<u>74,221</u>	<u>81,981</u>	<u>80,928</u>	<u>82,444</u>

#### Notes

1. The 1992 approved budget was prepared in 1991 at December 1990 cost levels based on information available at that time. The increase in the level of Commonwealth assistance reflects the allocation of supplementary funds to meet increased cost levels including salary award variations occurring in 1992. Also, the University was awarded an additional \$150,000 under an Equality of Opportunity initiative.
2. The estimated income from international students shown in the 1992 approved budget was based on known 1991 enrolments at the time of preparing the budget. The amended 1992 budget reflects the actual level of enrolments for 1992. The 1993 estimated income from this source was based on the University's known 1992 enrolments at the time of preparing the budget and projected 1993 enrolments as outlined in its planning document Towards 2000.
3. The increase in expenditure allocations from the approved 1992 budget to the amended 1992 budget reflects the allocation of supplementary Commonwealth grants to cover increased cost levels as outlined in note 1 above combined with increases in allocations for international students (refer note 2 above).
4. The increase in the 1992 amended budget reflects decisions made during the year to fund specific one-off projects.

## INVESTMENT MANAGEMENT PERFORMANCE

During 1992, the University engaged a consultant to review the University's investment strategy. After allowing for growth, the University's financial assets are expected to vary over the course of a year between \$23 million and \$43 million. Following the above review, it was decided that for administrative purposes the University divide its financial assets into two separate funds:

1. A short term fund of up to \$20 million to handle day-to-day cash management needs, to be invested in cash, deposit and bank bills;
2. A longer term investment fund for the \$23 million core financial assets, to be invested in fixed interest assets.

This process was subsequently implemented and at the end of 1992, a total of \$24 million was held with the NSW Treasury Corporation Hourglass investments, \$20.5 million in the fixed interest facility and \$3.5 million in the cash facility to cover day-to day operating expenses.

Prior to August 1992, short term funds were managed by the University and invested in bank bills and bank deposits. In August it was decided to invest all short term funds in the NSW Treasury Corporation Hourglass Cash Facility, as the facility had performed slightly better than bank bills and deposits and was more efficient in terms of time spent on funds investment.

Clause 4A of the Annual Reports (Statutory Bodies) Regulation 1985 requires the University to report investment performance of the University's surplus funds compared with relevant Hourglass investment facilities. The University's actual returns and comparable Hourglass benchmark rates for 1992 are given below:

Duration of Underlying Liabilities	University Return %	Hourglass Benchmark Return %
0 - 1 year	6.85	6.88 Cash Facility
1 - 5 years	9.57	9.57 Fixed Interest Facility
5 - 10 years	9.57	9.28 Diversified Facility
Over 10 years	9.57	0.71 Balanced Facility

The University has performed better than the benchmark for liabilities in excess of 5 years while investments of less than 5 years are close to or equal the benchmark.

## GRANTS TO NON-GOVERNMENT COMMUNITY ORGANISATIONS

The following grants were provided to non-government community organisations.

Name of Organisation	Amount	Purpose of Grant
Tertiary Awareness Program	\$4,000	The promotion of tertiary education in the West and South West of Sydney.
City of Wollongong Symphony Orchestra	\$2,000	The promotion and support of music in the Arts.
Workers' Education Association	\$6,125	The support of continuing education.
Illawarra Institute of Sport	\$13,000	The promotion and support of sporting activities and sporting excellence.

The above grants are included in the line *Other overheads* under the heading *Overheads* in the Operating Budget.



## PAYMENT OF ACCOUNTS

Commencing 1st July 1992, the New South Wales Treasury introduced a new reporting requirement regarding the time taken to pay creditors' accounts. This is aimed at improving payment performance and the management of accounts payable. Results for the quarters ending 30 September and 31 December 1992 are as follow:

	30 September	31 December
	\$	\$
Interest paid due to late payments	Nil	Nil
<b>Accounts payable at month end</b>		
Current	216,985	480
Less than 30 days overdue	8,057	128
Between 30 and 60 days overdue	6,618	(145)
Between 60 and 90 days overdue	999	744
More than 90 days overdue	2,629	(7945)
Total	<u>\$235,288</u>	<u>(\$6,738)</u>
<b>Details of accounts paid</b>		
Accounts paid on time	95.22%	87.21%
Total of accounts paid on time	\$14.6million	\$17.4million
Total amount of accounts paid	\$15.2million	\$18.2million

### Commentary

Figures in brackets signify outstanding credit notes which will be applied against future payments or for which refunds will be sought.

The performance of accounts paid on time has reduced from 95.22% in the September quarter to 87.21% for the December quarter.

The major cause of the drop in performance related to minor delays in payment of 1 to 4 days arising from computer system problems and delays in the production of Foreign currency payments. The latter delays were a combination of changes in procedures and the need to allow for additional payments to be made prior to the end of the financial year so as to meet year end accounting requirements. Action is being taken to avoid such occurrences in the future.

Adjusted figures for the December quarter after allowing for the above exceptions are:

Accounts paid on time	96.38%
Total of accounts paid on time	\$17.9 million

The remaining accounts which had not been paid on time were the result of the failure of suppliers to submit invoices on a timely basis and the time taken to resolve disputes.

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## RISK MANAGEMENT AND INSURANCE

The University does not self-insure but arranges external insurance cover for property, general third party and products liability, professional indemnity, personal accident, motor vehicle, third party property damage, workers' compensation, voluntary workers, overseas travel for University officers and employees, and marine hull. Property cover includes industrial risks, burglary, fidelity guarantee, accidental damage, property in transit and machinery breakdown.

Workers' compensation cover is arranged with Q.B.E. Workers Compensation NSW Ltd. The other insurance policies are arranged through the University's broker Unimutual.

In 1991, a complete property risk assessment survey was carried out by Sun Alliance Australia as a condition of entry to Unimutual. This survey is to be updated in 1993.

In 1992, a review of the University's security arrangements by an external consultant, Mr. Michael Pollard, assessed the University as low risk. This review made a number of recommendations in relation to security which have been acted upon.

The University has a number of committees which review various activities of the University and consequently prevent and/or minimise associated risks. The University's Occupational, Health and Safety Committee undertakes regular reviews and inspections of all buildings and facilities based on risk assessments, taking into account building structures, work activities, plant and materials, for the purpose of preventing and minimising personal injury.

The Human Experimentation Ethics Committee is required to provide clearance for all experiments which involve invasive procedures in relation to humans (eg, blood or tissue sampling) or which may create risk or medically significant stress (eg, clinical trials of drugs, experiments in lifting and other human movements.) The Committee is an accredited Institutional Ethics Committee (I.E.C.) under guidelines laid down by the National Health and Medical Research Council, and is also the I.E.C. for the Illawarra Area Health Service.

The Audit Committee undertakes reviews of the University's annual Financial Statements, audit programmes and reports, and internal controls to enable the Council to discharge more effectively its fiduciary responsibilities with regard to the University's accounting, control and reporting affairs, by monitoring both the internal control environment and management stewardship over University assets.

# DONORS AND BENEFACTORS

## Prizes

	\$
AFUW Illawarra Branch	200
Applied Probability Trust	2,000
Australasian Institute of Mining & Metallurgy (Illawarra Branch)	200
Australian Institute of Metals	300
Australian Institute of Political Science	50
Australian Society of Certified Practising Accountants	1,500
BHP Sheet & Coil	1,710
BHP Steel	300
Bread Industry Employees Union	2,815
C.W.A. NSW Wollongong	300
Clary Bros.	1,200
Comalco Aluminium Ltd.	2,000
Commonwealth Banking Corporation	300
Dr. Duncan Brown	500
Estate E H Hayton	16,380
Estate Late Orestis Trikas	1,724
Friends of the University	5,000
Graham Bell & Bowman	2,000
IBM Australia Ltd.	450
Illawarra Mutual Building Society	3,600
Incitec Ltd	100
Institute of Electrical Engineers NSW	200
Joint Coal Board	700
KPMG Peat Marwick	100
Metal Building Products Manufacturers Association	200
MM Metals	200
MM Metals Port Kembla	1,500
Mr B.C. Moldrich	100
Mt Warrigal Retirement Village Ltd.	500
National Safety Council of Australia (NSW Division)	100
NEI John Thompson	2,500
Parsons Family Trust	360
Soroptimist International	1,100
University of Wollongong Recreation & Sports Association	3,000
Western Mining Corporation Limited	300
William S Gossett	2,000

## Undergraduate Scholarships

A W Tyree Transformers Pty Ltd	4,650
ACT Electricity & Water Authority	9,300
ACT Roads & Transport	18,600
Apple Computer Australia Pty Ltd	9,300
BHP Steel	14,650
Daly Bussoletti & Co	2,325
Denley Gargett & Baird	2,325
Department of Education Sth	9,300
Eisman Family Trust	9,300
Higgins Dyson & Webley	2,325
Illawarra Electricity	18,600
Illawarra Mutual Building Society	9,300

	\$
Illawarra Technology Corporation Ltd.	32,900
Kell Heard McEwan & Lough	10,333
Kembla Coal & Coke Pty. Ltd.	27,400
McGuire & McInerney	4,650
MM Metals Port Kembla Works	9,300
Nortel Australia Pty. Ltd.	9,300
OTC	9,300
Peedom Brodie & Ward	2,325
Southern Copper	9,300
University of Miami	1,999
Waterboard Training & Development	9,300
Wollongong City Council	9,300

## Postgraduate Scholarships

Australian Institute of Nuclear Science and Engineering Inc.	7,500
Australian Nuclear Science and Technology Organisation	7,500
Australian Research Council	840,700
Australian Wool Corporation	21,412
BHP	62,906
Illawarra Technology Corporation Ltd.	242,824
Johnson and Johnson Australia Pty. Ltd.	10,000
National Heart Foundation	17,342
Roads and Traffic Authority	10,000
Thomson Sintra Pacific Pty. Ltd.	10,000
Water Board	25,000

## Other Donations

A.B.C.	240
Australian Inst. Mining and Metallurgy	6,000
Australian Nuclear Science and Technology Organisation	4,000
Australian Nuclear Science and Technology Organisation	50,000
BHP Slab & Plate Products	110,000
Business Machine Specialists Pty. Ltd.	9,124
Commemorative Association for the Japan World Exposition	43,943
CSIRO Australia	20,000
Estate of the Late Jean Lang	5,000
Hansons, Solicitors	3,000
Illawarra Credit Union	10,000
Illawarra Technology Corporation Ltd.	2,500
James N Kirby	3,000
Kawai Australia Pty. Ltd.	25,114
Law Foundation of NSW	5,000
Minter Ellison	500
Mr B G Jones	503
Mr P G Kell	3,352
Professor and Mrs JLC Chipman	1,000
Professor KR McKinnon and Ms Sue Walker	2,500
Russell McLelland & Brown	3,000
St George Bank	8,000
Vivien Twyford Communication Pty. Ltd.	1,000



# **Financial Statements**

# Finance Report

Amendments to the Australian Accounting Standards have resulted in changes in accounting policies which had considerable impact on the operating result and accumulated funds for 1992, as detailed below.

Grants and contributions totalling \$13.1 million received in 1991 for the 1992 year have not been included in the Income and Expenditure Statement for 1992. This clearly has an impact on the operating result for 1992. Total income reported in the Income and Expenditure statement in 1992 is \$94.1 million compared with \$94.7 million in 1991.

After allowing for the \$13.1 million received in 1991 for the 1992 year, total income for 1992 is \$107.2 million.

Commonwealth government grants were the most affected by this change in accounting policy. The reported income for recurrent grants for 1992 appears to have dropped from \$58.3 million in 1991 to \$55.0 million in 1992, when in fact the University received a total of \$64.5 million for the 1992 year.

Grants for 1993 will not be affected in this way as the Commonwealth Government has amended its grant payment schedule so that all income in respect of the current year will be received in that year.

The above change, together with other changes in accounting policy also impacted on accumulated funds which increased to \$111.6 million at the beginning of 1992. At the end of 1992 accumulated funds totalled \$116 million. This amount should not be construed as available unspent funds as a major component is represented by property, plant and equipment which cannot be realised.

The most significant variances between total income received for the 1992 year (including \$13.1 million referred to above) and 1991 income occurred in Commonwealth Government grants (\$6.2 million or 10.6 per cent for recurrent and \$3.4 million or 63.1 per cent for research), student fees (\$2.92 million or 20.2 per cent) and investment income (-\$1.2 million or -31.8 per cent).

The increase in the Commonwealth government recurrent grant reflects increases to cover the pipeline effect of approved growth in student load, combined with supplementation to cover academic salaries and other cost increases.

The increase in Commonwealth government research grants reflects the University's enhanced reputation and ability to attract research funds.

The increase in student fee income is a combination of increases in interna-

tional student fees (\$2.13 million), student residence fees (\$0.73 million) and miscellaneous fees (\$64,000). The continued growth in the international student programme is the result of sustained recruitment of first year students with particular emphasis on postgraduate students, higher retention rates of other students, the growing reputation of the University and further development of new markets. The increase in student residence fees is the result of additional places constructed at Campus East and available from Autumn session 1992.

Interest rates continued to fall in 1992 thereby adversely affecting investment income. Despite this, a review of investment performance for the year indicates that returns were equal to, or better than, the benchmark return established by the NSW Treasury.

The most significant changes in expenditure included a reduction in consultant fees as the result of fewer consultants being used in 1992, a reduction in depreciation reflecting the full impact of building valuations which were revised downwards in November and December 1991 and increases in library and minor works reflecting increased budget allocations for those items in 1992.

A reduction in repairs and maintenance reflected specific one-off projects undertaken in 1991, which increased the 1991 level of expenditure.

An increase in travel reflected an increase in activity associated with research projects and overseas student recruitment. The increase in research travel is consistent with the increase in income received for research purposes.

Variances in the provisions for annual leave and long-service leave reflected the annual net change to the University's liability for employee leave entitlements. Before 1991, these liabilities were estimated. For 1991, the actual liability for annual leave was calculated resulting in a credit adjustment of \$304,000 in that year. The \$65,000 reported in 1992 reflects the net change to the liability from 1991 to 1992.

The actual liability for long-service leave was not calculated until the 1992 year. The 1991 expense of \$1,485,000 represents the estimated net change in the liability for that year. The 1992 provision of \$888,000 is the adjustment required to reflect the actual liability at the end of 1992.

The doubtful debts provision has been reduced from \$127,000 in 1991 to a credit of \$22,000 in 1992. The 1991 provision had been increased to cover a specific debt, which was subsequently collected. The credit in 1992, together with the reduction in bad debts, reflects a net decrease in the proportion of total debt which is considered at risk combined with improvements in debt collection.



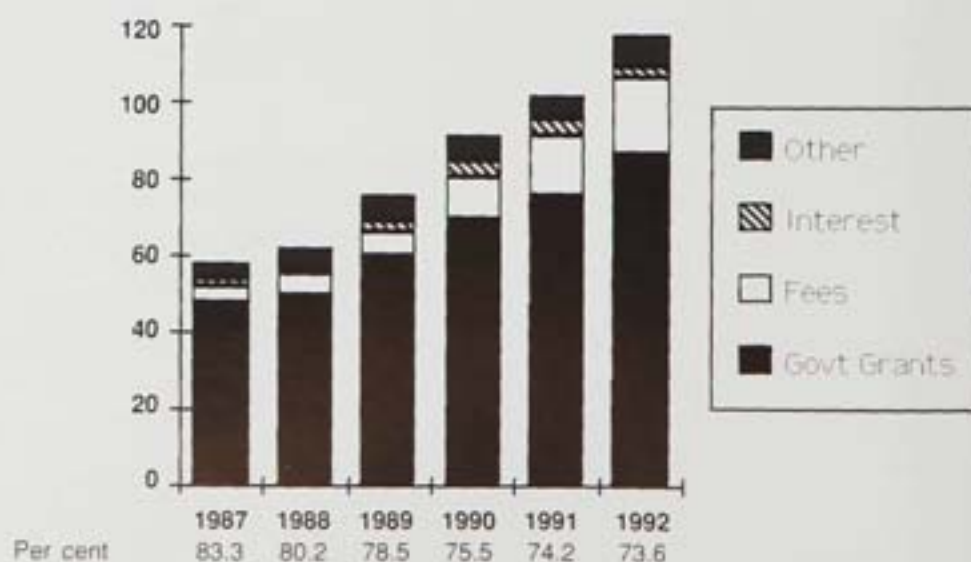
**TABLE 1: COMPARISON OF INCOME**

	1992* \$,000s	1991 \$,000s	% Variation
Government Grants	77,851	68,483	13.7
Higher Education Contribution Scheme	2,223	1,649	34.8
Student fees	17,376	14,453	20.2
Investment income	2,610	3,827	-31.8
Other	7,194	6,281	14.5
Total income	107,254	94,693	13.3

\* represents total income received for the 1992 year.

### GOVERNMENT GRANTS AS A PERCENTAGE OF TOTAL INCOME

The proportion of income from Government sources has steadily declined over recent years from 83.3% in 1987 to 73.6% in 1992 as shown in the following graph.



# FINANCIAL STATEMENTS

## 31 DECEMBER 1992

### AUDITOR-GENERAL'S OPINION

#### UNIVERSITY OF WOLLONGONG

To Members of the New South Wales Parliament and Members of the Council of the University of Wollongong

#### Scope

I have audited the accounts of the University of Wollongong for the year ended 31 December 1992. The preparation and presentation of the financial statements, consisting of the accompanying balance sheet, income and expenditure statement and statement of cash flows, together with the notes thereto, and the information contained therein is the responsibility of the Council of the University. My responsibility is to express an opinion on these statements to Members of the New South Wales Parliament and Members of the Council of the University based on my audit as required by Sections 34 and 41C(1) of the Public Finance and Audit Act 1983.

My audit has been conducted in accordance with the provisions of the Act and Australian Auditing Standards to provide reasonable assurance as to whether the financial statements are free of material misstatement. My procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial statements, and the evaluation of accounting policies and significant accounting estimates. These procedures have been undertaken to form an opinion as to whether, in all material respects, the financial statements are presented fairly in accordance with the requirements of the Public Finance and Audit Act 1983, and Australian accounting concepts and standards so as to present a view of the University of Wollongong which is consistent with my understanding of its financial position and the results of its operations.

This audit opinion has been formed on the above basis.

#### Qualification

As indicated in Note 1(a)(ii) to the financial statements, the University has not complied with Australian Accounting Standard AAS24 "Consolidated Financial Reports" in that a consolidated balance sheet, consolidated income and expenditure statement and consolidated statement of cash flows for the University and its controlled entities has not been prepared.

#### Audit Opinion

In my opinion, except for the effects on the financial statements of the matter referred to in the preceding paragraph, the financial statements of the University of Wollongong comply with Section 41B of the Act and present fairly the financial position of the University of Wollongong as at 31 December 1992 and the results of its operations for the year then ended in accordance with Statements of Accounting Concepts and applicable Accounting Standards.



A C HARRIS

SYDNEY  
22 April 1993

## STATEMENT BY MEMBERS OF THE COUNCIL

Pursuant to Section 41C(1B) and (1C) of the Public Finance and Audit Act, 1983, and in accordance with a resolution of the members of the Council, we declare on behalf of the Council of the University of Wollongong that, in our opinion:

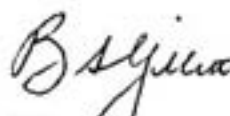
1. Subject to the effect of non compliance with the Accounting Standard AAS 24, the accompanying financial statements exhibit a true and fair view of the financial position of the University of Wollongong as at 31 December 1992 and transactions for the year then ended.
2. Except for Australian Accounting Standard AAS 24 "Consolidated Financial Reports" the statements have been prepared in accordance with the requirements of the Public Finance and Audit Act, 1983, Public Finance and Audit (Statutory Bodies) Regulation, 1985, Statement of Accounting Concepts and applicable Accounting Standards.

Further, we are not aware of any circumstances which would render any particulars included in the financial statements to be misleading or inaccurate.



**G Sutton**  
Acting Vice-Chancellor

19 April 1993



**B Gillett**  
Deputy Chancellor



# BALANCE SHEET AS AT 31 DECEMBER 1992

1991 \$		Note	1992 \$
<b>Current Assets</b>			
181,959	Cash		23,740
6,701,797	Receivables	3(i)	5,758,739
20,610,415	Investments	3(ii), 6	3,514,980
404,435	Inventories	3(iii)	762,960
603,931	Other	3(iv)	112,836
<u>28,502,537</u>	<b>TOTAL CURRENT ASSETS</b>		<u>10,173,255</u>
<b>Non-current Assets</b>			
8,427,368	Investments	4(i), 6	20,535,159
52,741,732	Receivables	4(ii)	51,043,498
103,237,159	Property, plant and equipment	4(iii)	113,950,003
<u>164,406,259</u>	<b>TOTAL NON-CURRENT ASSETS</b>		<u>185,528,660</u>
<u>192,908,796</u>	<b>TOTAL ASSETS</b>		<u>195,701,915</u>
<b>Current Liabilities</b>			
—	Cash book balance		946,357
3,659,586	Creditors and borrowings	7(i)	2,511,871
4,876,695	Provisions	7(ii)	5,554,306
1,580,058	Special funds	7(iii)	1,796,051
16,022,301	Income received in advance	7(iv)	2,621,256
21,233,896	Deferred income — Commonwealth Government Grant	7(v)	—
2,598	Trust funds	11	2,605
<u>47,375,134</u>	<b>TOTAL CURRENT LIABILITIES</b>		<u>13,432,446</u>
<b>Non-current Liabilities</b>			
4,065,330	Creditors and borrowings	8	3,300,000
6,145,358	Provision for long-service leave	10(ii)	6,224,318
50,760,791	Provision for State superannuation	10(iii)	48,935,380
—	Provision for State basic benefit superannuation	10(v)	157,538
—	Provision for Professorial Superannuation Scheme	10(i)	5,627,222
5,523,158	Trust funds	11	1,129,498
976,997			
<u>67,471,634</u>	<b>TOTAL NON-CURRENT LIABILITIES</b>		<u>65,373,956</u>
<u>114,846,768</u>	<b>TOTAL LIABILITIES</b>		<u>78,806,402</u>
<u>\$78,062,028</u>	<b>NET ASSETS</b>		<u>\$116,895,513</u>
<b>RETAINED EARNINGS</b>			
9,953,828	Accumulated funds	13, 25	116,097,145
67,180,661	Assets acquired free of liability	12(i)	—
441,158	Loan repayment reserve	12(ii)	—
486,381	Asset revaluation reserve	12(iii)	486,381
—	Major repairs and replacement reserve	12(iv)	311,987
<u>\$78,062,028</u>	<b>TOTAL RETAINED EARNINGS</b>		<u>\$116,895,513</u>

The Balance Sheet is to be read in conjunction with the notes to and forming part of the accounts on pages 117 to 129.

# STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER 1992

1991 \$		Note	1992 \$
	<b>Income</b>		
68,483,428	Government grants	16	65,885,820
1,648,828	Higher Education Contribution Scheme	18	2,223,317
14,452,993	Fees	20	17,376,352
3,827,394	Investment Income	19	2,610,256
6,280,776	Other income	21	7,731,469
-	Deferred income due from Commonwealth/State Government for superannuation liability	17	(1,681,245)
94,693,419	Total income		94,145,969
	<b>Expenditure</b>		
52,000	Audit fees	24	60,080
25,810	Bad debts		19,806
922,642	Consultants fees		437,005
9,681,102	Consumables		10,895,008
5,863,719	Depreciation		3,822,269
640,092	Interest paid		552,965
2,284,418	Library		2,740,371
2,209,803	Repairs and maintenance		1,493,214
50,399,249	Salaries and related costs		56,978,320
5,505,125	Superannuation in-service costs		6,442,088
1,564,346	Travel		2,366,703
6,206,464	Telephone, postage and other overheads		5,803,452
	Financial transfers for:	1(h)	
3,381,190	Equipment		2,826,200
653,543	Minor works		1,000,301
2,374,550	Scholarships and prizes		3,031,133
(304,652)	Provision for annual leave	10(iv)	64,554
126,952	Provision for doubtful debts		(21,920)
1,485,106	Provision for long-service leave	10(ii)	888,234
323,500	Provision for major repairs and replacements		(452,605)
1,491,718	Provision for Professorial Superannuation Scheme	10(i)	204,555
-	Provision for State Superannuation	10(iii)	(1,681,245)
-	Provision for State basic benefit superannuation	10(v)	933,538
8,457	Loss on disposal of plant and equipment		66,419
94,895,134	Total expenditure		98,470,445
201,715	Operating deficit prior to abnormal items		4,324,476
	Abnormal items		
	- deferred income due from Commonwealth/State Government for superannuation liability	17	-
(22,764,027)	- Provision for State Superannuation	10(iii)	-
201,715	Operating deficit after abnormal items		4,324,476
-	Less Government grants for capital purposes	22,1(a)(ii)	8,829,000
(201,715)	Operating surplus after abnormal items and Government grants for capital purposes	4,504,524	
5,723,624	Add accumulated funds at the beginning of the financial year	13	111,568,970
5,521,909			116,073,494
	Add transfers from reserves		
4,708,077	Assets acquired free of liability	12(i)	-
-	Loan repayment reserve	12(ii)	335,638
-	Major repairs and replacements reserve	12(iv)	265,618
10,229,986			116,674,450
	Less transfers to reserves		
276,158	Loan repayment reserve	12(ii)	-
-	Major repairs and replacement reserve	12(iv)	577,605
\$9,953,828	Accumulated funds at the end of the financial year	25	\$116,097,145

The Statement of Income and Expenditure is to be read in conjunction with the notes to and forming part of the accounts on pages 117 to 129.

**STATEMENT OF CASH FLOWS  
FOR THE YEAR ENDED 31 DECEMBER 1992**

**1992  
\$  
Inflows  
(Outflows)**

**Cash flows from operating activities**

Inflows:

Higher Education Contribution Scheme	
Student payments	2,238,156
Higher Education Trust Fund	10,590,150
Fees	17,415,509
Interest received	2,681,905
Other	9,368,749

Outflows:

Payments to suppliers and employees	(95,310,622)
Interest paid	(552,965)

**NET CASH USED IN OPERATING ACTIVITIES (refer note B below)** (53,569,118)

**Cash flows from investing activities**

Proceeds from investments	4,479,386
Payments for purchase of property, plant and equipment	(15,196,322)
Proceeds from sale of plant and equipment	537,684

**NET CASH USED IN INVESTING ACTIVITIES** (10,179,252)

**Cash flows from financing activities**

Repayment of staff loans	16,378
Sundry advances	(1,101,649)
Repayment of borrowings	(903,863)

**NET CASH USED IN FINANCING ACTIVITIES** (\$1,989,134)

**Cash flows from government**

Commonwealth government grants	60,693,687
NSW State Government grants	3,430,983

**NET CASH FROM GOVERNMENT** 64,124,670

Net decrease in cash held 1,612,834  
Cash at beginning of reporting period 4,205,197

**Cash at end of reporting period** \$2,592,363

(refer note A below and note 1(a)(iv))



## Notes to the Statement of Cash Flows

### A. Reconciliation of cash

For the purposes of the Statement of Cash Flows, the University considered cash to include cash on hand and in banks, and investments in the New South Wales Treasury Corporation Hourglass cash facility. Cash at the end of the reporting period as shown in the Statement of Cash Flows is reconciled to the related items in the balance sheet as follows:

	1992 \$
Cash	23,740
Cash book balance	(946,357)
Current investments	3,514,980
	<u>\$2,592,363</u>

### B. Reconciliation of net cash used in operating activities to operating result.

	1992 \$
Operating result	(4,324,476)
Decrease in debtors	1,573,221
Decrease in accrued income	334,017
Increase in inventories	(358,525)
Decrease in prepayments	491,095
Depreciation	3,822,269
Loss on sale of plant and equipment	66,419
Decrease in deferred income due from Commonwealth/State government for superannuation liability	1,681,245
Government grants for capital purposes	8,829,000
Government grants	(64,124,670)
Decrease in creditors and accruals	(895,030)
Financial transfer for	
Equipment	2,826,200
Minor works	1,000,301
Equipment paid	(2,718,323)
Minor works paid	(916,497)
Decrease in students fees received in advance	(178,714)
Provisions	
Annual leave	64,554
Doubtful debts	(21,920)
Long-service leave	888,234
Major repairs and replacements	(452,605)
State basic benefit superannuation	933,538
State superannuation	(1,681,245)
Professorial superannuation	204,555
Other contributions	49,787
Long-service leave paid	(706,824)
Professorial superannuation paid	(107,232)
Trust fund contributions	179,191
Trust fund payments	(26,683)
	<u>(\$53,569,118)</u>

### C. Preparation of comparative figures for 1991 is not practicable.

The Statement of Cash Flows is to be read in conjunction with the notes to and forming part of the accounts on pages 117 to 129.

## NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 1992

### 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements presented herein relate to the activities of the University of Wollongong. In preparing its financial statements the University has:

- (i) complied with the Public Finance and Audit Act 1983 and the Public Finance and Audit (Statutory Bodies) Regulations 1985.
- (ii) complied with Australian Accounting Standards and Statements of Accounting Concepts, with the exception of Australian Accounting Standard AAS 24. The University has not complied with Australian Accounting Standard AAS 24, 'Consolidated Financial Reports' in that a consolidated balance sheet, consolidated income and expenditure statement and consolidated statement of cash flows for the University and its controlled entities have not been prepared as the entities do not have common reporting dates. Action is being taken to implement common reporting periods with effect from 1 January 1993 so that financial statements of University controlled entities will be consolidated with those of the University for the year ended 31 December 1993. Details of entities controlled by the University together with the results of operations are shown in note 2.

The Commonwealth Department of Employment, Education and Training (DEET) has developed streamlined financial reports for use by all universities with effect from year ended 31 December 1994. In addition to consolidated statements, the University and its entities will introduce the DEET reporting arrangements with effect from 1 January 1993 so that both these changes are confined to one year.

The financial statements have been prepared on an accrual basis, on a "going concern" basis and, except where otherwise stated, the measurement base applied is historical cost.

#### a) Change of accounting policy

- (i) In previous years provision had been made in the financial statements for major repairs and maintenance of student residences. Commencing 1st January 1992, this provision has been treated as a reserve. This change will increase the operating result as the amount transferred to the provision will no longer be included in the operating surplus/deficit. For 1992, the impact on the operating statement will be to increase the result by \$311,987.
- (ii) In previous years monetary grants and contributions received in advance, whether related to fixed assets or income, were initially brought to account as current liabilities. As these grants and contributions were expended, they were recognised as operating or deferred income as appropriate.

Commencing 1 January 1992, all grants and contributions received for meeting operating expenses are included as part of the operating result for the financial year. Income received in advance as at 31 December 1991 in respect of 1992 grants and income accrued in respect of 1991 but not received until 1992 has been transferred to accumulated funds as at 1 January 1992. The impact of this change in accounting policy is that grants and contributions totalling \$13.1 million received in 1991 in respect of the 1992 year are not included in the operating result for 1992.

From 1 January 1992 grants and contributions provided for the construction or acquisition of a non-current physical asset or to increase the operating capacity of an existing asset are shown after the operating surplus/deficit for the year. Amounts previously carried in the balance sheet as deferred income were transferred to accumulated funds as at 1 January 1992.

Previously, where the asset was depreciated, an amount equivalent to the depreciation was recognised as income and the deferred income was correspondingly reduced. The impact of the above change will be to reduce the operating surplus as the income equivalent to depreciation will no longer be recognised when the asset is depreciated. Instead the grant will be recognised in total in accumulated funds in the period in which it is received. The impact on the operating surplus for 1992 is estimated to be \$991,904.

- (iii) In 1990, an "assets acquired free of liability" account was established to recognise property, plant and equipment acquired prior to 1990 and previously treated as an expense in the year of acquisition. From 1 January 1992, this account has been treated as accumulated funds.
- (iv) Australian Accounting Standard AAS28 "Statement of Cash Flows" came into effect from 30 June 1992. This standard supersedes Australian Accounting Standard AAS12 "Statement of Sources and Applications of Funds". In accordance with the standard, the University has prepared a Statement of Cash Flows for the year ended 31 December

1992 instead of a Statement of Sources and Applications of Funds as in prior years. Preparation of comparative figures for 1991 for the Statement of Cash Flows is not practicable.

No other changes have been made to the University's accounting policies during the financial year and except where changes have been made, the policies have been applied consistently throughout the period.

**b) Doubtful debts**

Allowance has been made in the accounts for doubtful debts, the provision being calculated on all debts owing to the University.

**c) Employees entitlements**

Provision has been made for employee entitlements for annual leave, long-service leave, and superannuation. The balance of these provisions at 31 December 1992 is categorised for balance sheet purposes as either non-current or current liabilities, the latter component representing an estimate of the extent to which payment is likely to be made during the next twelve (12) months.

**d) Valuation of assets**

**i) Investments**

Investments are shown in the balance sheet at cost.

**ii) Property, plant and equipment.**

Valuations adopted in respect of property, plant and equipment are as follow:

**Land**

Last available Valuer General's valuation.

**Buildings**

All buildings, except those which have been recently constructed and are held at cost, have been valued at Valuer General's valuations, dated 29 November 1991 and 3 May 1992. The valuations have been determined on the following basis:

- there is no land content in the valuations.
- the values are a fair market value (not new or replacement cost), based on existing use and condition.
- a number of normal inclusions such as floor coverings, light fittings, window coverings and other fixtures have been included in the valuations.
- the sizes of buildings have been determined from plans provided by the University, subject to random checking.

The University will progressively revalue all buildings older than five years and maintain a programme of revaluation of all such buildings at least once every five years.

Buildings have been brought to account at market value based on existing use and condition. In considering the values to be adopted, Council has made reference to the above Valuer General's valuations and cost in the case of recently constructed buildings. It is considered that the value of buildings after allowance for depreciation, fairly represents the market value of these assets.

**Works of Art**

All works of art, except those which were purchased subsequent to valuation and are held at cost, have been valued at independent valuation as assessed by Mr John Bailly, A.M., Government approved valuer, and dated 26 June 1991.

**Other**

Motor vehicles and equipment are valued at acquisition cost.

**e) Gains/Losses on disposal of assets**

Gains and losses on disposal of assets are included in the income and expenditure statement in the period in which the disposal of the asset occurs.

**f) Depreciation**

Depreciation is calculated on a straight-line basis so as to write off the net cost of each non-current asset during its expected useful life. Additions are depreciated from the date of acquisition.

Depreciation has been calculated at the following rates:

Buildings	2.5%
Computer equipment	20%
Motor vehicles	10%
Other equipment	10%



**g) Insurance**

The University does not self insure but arranges external insurance cover for property, general liability, professional indemnity, accident, motor vehicles, workers compensation and directors and officers. Buildings are insured at replacement value.

**h) Financial transfers for equipment and minor works**

Section 8 of the Higher Education Funding Act, 1988, allows financial transfers to special funds which are to be used only for future expenditure on equipment or minor building projects of the institution to be treated as expenditure for operating purposes in the year in which the amount is transferred.

The following transfers were made to special funds accounts:

1991 \$		1992 \$
3,381,190	Equipment	2,826,200
653,543	Minor works	1,000,301
<u>\$4,034,733</u>		<u>\$3,826,501</u>

A summary of movements in the special funds accounts is shown in note 7(iii).

**2. CONTROLLED ENTITIES**

The results from operations after extraordinary items in respect of entities controlled by the University are as follow:

	Year end 31 Dec 1992	Year end 31 Dec 1991
(i) Friends of the University of Wollongong Ltd	\$26,120	\$7,041
Action is being taken by the members to wind up the company in 1993.		
	Year end 30 June 1992	Year end 30 June 1991
(ii) Illawarra Technology Corporation Ltd		
Group (wholly owned by the University)	(\$1,976,347)	(\$1,460,295)
Company	(\$1,976,347)	(\$2,059,786)

The result for the year ended 30th June 1992 includes a revaluation decrement for buildings of \$2,200,149. The operating result before this item was a profit of \$223,802.

At 30 June 1992 the group included:

Polymer Systems Technology Pty Ltd	100% holding Nil	100% holding (\$219,276)
Automation & Engineering Applications Centre Limited	100% holding Nil	100% holding (\$389,384)
Automation Extension Services Pty Ltd	100% holding Nil	100% holding \$105,690

Polymer Systems Technology Pty Ltd, Automation and Engineering Applications Centre Limited and Automation Extension Services Pty Ltd were dormant for the year ended 30th June 1992 and were wound up on 14 December 1992.

- (iii) The University of Wollongong Foundation Ltd was incorporated on 3 December 1992 but has not traded in 1992.

	Year end 31 Dec 1992	Year end 31 Dec 1991
(iv) University of Wollongong Union	(\$71,786)	\$531,469
(v) University of Wollongong Union Kids Uni.	(\$12,298)	\$23,880
(vi) University of Wollongong Recreation and Sports Association	\$95,404	\$57,380

**NB.** Brackets signify a loss.

**3. CURRENT ASSETS**

1991 \$		1992 \$
(i) Receivables		
5,324,103	Debtors	3,750,882
153,552	Less provision for doubtful debts	131,632
<u>5,170,551</u>		<u>3,619,250</u>

1991 \$		1992 \$
1,032,809	Sundry advances	2,134,458
498,437	Accrued income	5,031
<u>\$6,701,797</u>		<u>\$5,758,739</u>
(ii) Investments		
4,023,238	Government and semi-government securities — unquoted	3,514,980
16,587,177	Short-term deposits	—
<u>\$20,610,415</u>	(refer note 6)	<u>\$3,514,980</u>
(iii) Inventories		
140,462	Central store	140,351
263,973	Personal computers	585,878
—	Catering stock	11,082
—	Other	25,649
<u>\$404,435</u>		<u>\$762,960</u>
(iv) Other		
<u>\$603,931</u>	Prepayments	<u>\$112,836</u>

#### 4. NON-CURRENT ASSETS

1991 \$		1992 \$		
(i) Investments				
8,427,367	Government and semi-government securities — unquoted	20,535,158		
	SSAU Nominees Pty Ltd			
1	One (1) \$1 share at par	1		
<u>\$8,427,368</u>	(refer note 6)	<u>\$20,535,159</u>		
(ii) Receivables				
	Amount owing by Commonwealth/State			
52,671,791	Government (refer note 17)	50,990,546		
69,941	Loans to staff (refer note 5)	52,952		
<u>\$52,741,732</u>		<u>\$51,043,498</u>		
(iii) Property, Plant and Equipment				
	Asset value	Accumulated depreciation	Written down value	Market value *
Buildings				
at VG valuation	56,955,500	1,513,452	55,442,048	55,442,048
at cost	42,485,140	1,167,893	41,317,247	41,317,247
Total buildings	99,440,640	2,681,345	96,759,295	96,759,295
At cost				
Computer equipment	6,622,303	4,682,178	1,940,125	1,940,125
Land	7,832,858	—	7,832,858	7,832,858
Motor vehicles	1,495,634	220,564	1,275,070	1,275,070
Other equipment	10,579,351	5,053,987	5,525,364	5,525,364
Works of art	617,291	—	617,291	617,291
	126,588,077	12,638,074	113,950,003	113,950,003

\* Market values have been based on the following:

Recently constructed buildings are valued at cost. All other buildings are valued by the Valuer General at market value based on existing use and condition. It is considered that the values of buildings after allowing for depreciation, fairly represent the market value of these assets.

Land is included in the accounts at the current valuations assessed by the Valuer General. This is considered to represent current market value. All land is owned by the University.

Other assets are valued at cost and, with the exception of works of art, depreciated. The written-down value of these assets represents an estimate of their current market value. Works of art purchased subsequent to the valuation in 1991 are valued at cost. All other works of art are held at independent valuation as assessed by Mr John Baily A M, Government approved valuer and dated 26 June 1991.

## 5. LOANS TO STAFF

In 1984 the University established a Housing Loan Scheme for staff at professorial level with a maximum loan available of \$30,000. Outstanding loans at the end of the financial year amounted to \$ 52,952 (1991 \$69,941).

## 6. INVESTMENTS

Summary of portfolio as at the end of the financial year:

	Face value \$	Cost \$	Market value \$
Government and semi-government securities			
Unquoted	24,050,138	24,050,138	24,050,138
One (1) share in SSAU Nominees Pty Ltd	1	1	1
	<u>24,050,139</u>	<u>24,050,139</u>	<u>24,050,139</u>
Comprising:			
Current Assets	Note 3(ii)	3,514,980	
Non-current assets	Note 4(i)	20,535,159	
		<u>\$24,050,139</u>	

## 7. CURRENT LIABILITIES

	1991 \$		1992 \$
(i) Creditors and Borrowings			
3,521,053	Creditors and accrued expenses		2,511,871
138,533	Secured loans (refer note 9)		-
<u>\$3,659,586</u>			<u>\$2,511,871</u>
(ii) Provisions			
452,605	Provision for major repairs and maintenance (refer note 12(iv))		-
560,000	Provision for long-service leave (refer note 10(ii))		700,000
1,911,000	Provision for State superannuation (refer note 10(iii))		2,055,166
-	Provision for State basic benefit superannuation (refer note 10(v))		776,000
104,367	Provision for Professorial superannuation (refer note 10(i))		109,863
1,848,723	Provision for annual leave (refer note 10(iv))		1,913,277
<u>\$4,876,695</u>			<u>\$5,554,306</u>
(iii) Special Funds (refer note 1(h))			
	Equipment	Minor works	Total
Balance at the beginning of the financial year	1,259,175	320,883	1,580,058
Transfer from recurrent funds	2,826,200	1,000,301	3,826,501
Funds provided by sale of equipment	24,313	-	24,313
	<u>4,109,688</u>	<u>1,321,184</u>	<u>5,430,872</u>
Less payments	2,718,323	916,498	3,634,821
Balance at the end of the financial year	<u>\$1,391,365</u>	<u>\$404,686</u>	<u>\$1,796,051</u>



## (iv) Income received in advance

1991 \$		1992 \$
	Commonwealth Government grants	
12,022,439	(refer note 1(a)(ii))	-
83,472	State Government grants (refer note 1(a)(ii))	-
2,772,874	Student fees	2,621,256
1,143,516	Other (refer note 1(a)(ii))	-
<u>\$16,022,301</u>	Total income received in advance	<u>\$2,621,256</u>

## (v) Deferred income

	Deferred income (refer note 1(a)(ii))	
<u>\$21,233,896</u>	Commonwealth Government grant	<u>-</u>

## 8. NON-CURRENT LIABILITIES

## Creditors and borrowings

1991 \$		1992 \$
<u>\$4,065,330</u>	Secured loans (refer note 9)	<u>\$3,300,000</u>

## 9. SECURED LOANS AND ADVANCES

## (i) Loans due later than two years but not later than five years

National Australia Bank \$3,300,000

This loan will be renegotiated for a further five year period in 1995.

During the year the Commonwealth Bank loans and one of the National Australia Bank loans were fully repaid. The remaining loan with the National Australia Bank loan for \$3.3 million is secured by way of mortgages over the properties known as International House and Weerona.

## (ii) Secured loans

1991 \$		1992 \$
	Current liability	
71,714	Commonwealth Trading Bank Loan No. 1	-
11,862	Commonwealth Trading Bank Loan No. 2	-
54,957	National Australia Bank	-
<u>138,533</u>		<u>-</u>
	Non-current liability	
375,749	Commonwealth Trading Bank loan No. 1	-
59,260	Commonwealth Trading Bank loan No. 2	-
3,630,321	National Australia Bank	3,300,000
<u>4,065,330</u>		<u>3,300,000</u>
<u>\$4,203,863</u>	Total secured loans	<u>\$3,300,000</u>

## 10. PROVISIONS FOR DEFERRED EMPLOYEE ENTITLEMENTS

## (i) Professorial Superannuation Scheme

The provision for Professorial Superannuation Scheme was established to provide members with a pension of up to 25% of salary on retirement. In 1984 the scheme was amended to provide for the payment of an additional contributory pension to members of the scheme on retirement. The scheme was closed to new members on 1 December 1987.

In a report prepared by Mercer Campbell Cook & Knight dated 24 January 1992, the University's liability at 1 January 1992 in respect of unfunded service was actuarially assessed at \$3.886 million based on membership of the fund at 1 January 1992. Assumptions adopted by the Actuary in determining this liability were:

Rate of salary increase: 8% per annum, plus promotional increases at younger ages

Rate of investment return: 9% per annum (net of tax)

Rate of increase of pensions: 8% per annum.

It is anticipated that further actuarial reviews of the scheme will be undertaken every three years.

Movements in the provision during the year were:

1991 \$		1992 \$
4,182,200	Balance at the beginning of the financial year	5,627,525
	Add contributions as per Statement of Income and Expenditure	
66,224	employer contribution	70,275
1,231,282	increase in unfunded liability	—
194,212	interest earnings from investments	134,280
1,491,718		204,555
	contributions from members for optional contributory 5% pension scheme	10,082
9,216	other contributions	2,155
43,425		
5,726,559		5,844,317
99,034	Less payments	107,232
\$5,627,525	Balance at the end of the financial year	\$5,737,085
	Comprising:	
104,367	Current liabilities	109,863
5,523,158	Non-current liabilities	5,627,222
\$5,627,525		\$5,737,085

(ii) **Long-Service Leave**

5,743,795	Balance at the beginning of the financial year	6,705,358
	Add contributions as per Statement of Income and Expenditure	
589,837	contributions	629,994
307,651	unfunded liability brought to account	(122,693)
587,618	interest earnings from investments	380,933
1,485,106		888,234
	transfer of entitlements from other organisations	29,636
10,391	other contributions	7,914
576		
7,239,868		7,631,142
534,510	Less payments	706,824
\$6,705,358	Balance at the end of the financial year	\$6,924,318
	Comprising:	
560,000	Current liabilities	700,000
6,145,358	Non-current liabilities	6,224,318
\$6,705,358		\$6,924,318

The accrued long-service leave liability in respect of employees with ten or more years' service at the end of the financial year is \$6,924,318 (1991 \$6,705,358 – estimate).

(iii) **State Superannuation Fund**

The University contributes to the New South Wales State Superannuation Fund in respect of present and former members of staff who are or were, members of the fund. In a letter dated December 1992 from the State Superannuation and Investment Corporation the University was advised that its gross liability at 31 December 1992 had been actuarially assessed at \$62.134 million (1991 \$63.692 million). Of this amount, \$11.143 million is held by the State Superannuation and Investment Corporation. The remaining liability of \$50.991 million is unfunded and has been brought to account as an amount owing by the Commonwealth/State Governments (refer note 17).

Assumptions adopted by the Corporation's Actuary in determining the University's liability were:

Rate of salary increases	7.5% per annum
Rate of increase in the Consumer Price Index	6.0% per annum
Interest rate	9.0% per annum

Movements in the provision during the year were:

1991 \$		1992 \$
29,907,764	Balance at the beginning of the financial year	52,671,791
22,764,027	(Decrease)/ increase in amount unfunded (refer note 17)	(1,681,245)
<u>\$52,671,791</u>	Balance at the end of the financial year	<u>\$50,990,546</u>
	Comprising:	
1,911,000	Current liabilities	2,055,166
50,760,791	Non-current liabilities	48,935,380
<u>\$52,671,791</u>		<u>\$50,990,546</u>

(iv) **Annual leave**

The University has a liability for untaken annual leave for non-academic staff. In accordance with contracts of employment academic staff are required to take annual leave each year and no annual leave is accrued. Payments for leave taken in-service or on termination are charged to current revenue. The liability for untaken annual leave at the end of the financial year is \$1,913,277 (1991 \$1,848,723 – estimated).

Movements in the provision during the year were:

1991 \$		1992 \$
2,153,375	Balance at the beginning of the financial year	1,848,723
304,652	Dr Increase in provision	64,554
<u>\$1,848,723</u>	Balance at the end of the financial year	<u>\$1,913,277</u>

(v) **3% Productivity (Basic Benefit) Superannuation**

The University contributes to the New South Wales State Authorities Non-Contributory Superannuation Fund for the 3% productivity (basic benefit) superannuation in respect of members of staff who are non-contributory members of the fund. The fund was closed to new members of the University from 8 December 1992. In accordance with funding requests, the University contributes an amount equivalent to 2.5% of members salaries. In a letter dated December 1992 from the State Superannuation Investment and Management Corporation, the University was advised that its gross liability at 31 March 1992 had been actuarially assessed at \$1,283,229. Using a formula provided in that letter, the University's gross liability at 31 December 1992 is \$1,819,537. Of this amount, \$885,999 is held by the State Superannuation Investment and Management Corporation. The remaining amount of \$933,538 has been brought to account as an unfunded liability.

Assumptions adopted by the Corporation's Actuary in determining the University's liability were:

Rate of salary increases	7.5% per annum
Rate of increase in the Consumer Price Index	6.0% per annum
Interest rate	9.0% per annum

	1992 \$
Unfunded liability brought to account	933,538
Balance at the end of the financial year	<u>\$933,538</u>
Comprising:	
Current liabilities	776,000
Non-current liabilities	157,538
	<u>\$933,538</u>

In addition to the above scheme, the University contributes an amount equivalent to 3% of members' salaries to the Tertiary Education Superannuation Scheme (TESS) in respect of members of that scheme. TESS has undertaken the liability for employee benefits for staff who are members of that scheme.



(vi) **Superannuation Guarantee Levy**

Commencing 1 July 1992, the University became liable for superannuation contributions for the Superannuation Guarantee Levy. Under the legislation the University contributes superannuation at a minimum rate equivalent to 4% of salaries for all employees. In 1992, \$47,003 was brought to account to reflect the increased contribution required in respect of those employees for whom contributions already made by the University were less than 4%, so as to bring the level of contribution up to 4%. From January 1993, the SGL rate will increase to 5%.

**11. TRUST FUNDS – PROFESSORIAL SUPERANNUATION SCHEME MANAGED FUNDS**

Movements in the funds during the year were:

(i) **Widows annuity accumulation fund**

1991 \$		1992 \$
139,292	Balance at the beginning of the financial year	156,068
1,687	Add contributions	—
17,687	Interest earnings from investments	11,873
158,666		167,941
2,598	Less payments	2,60
<u>\$156,068</u>	Balance at the end of the financial year	<u>\$165,336</u>

1991 \$		1992 \$
(ii) <b>Managed fund</b>		
431,433	Balance at the beginning of the financial year	823,527
309,699	Add contributions	72,643
102,287	Interest earnings from investments	94,675
843,419		990,845
19,892	Less payments	24,078
<u>\$823,527</u>	Balance at the end of the financial year	<u>\$966,767</u>
	Comprising:	
2,598	Current liabilities	2,605
976,997	Non-current liabilities	1,129,498
<u>\$979,595</u>	Total trust funds	<u>\$1,132,103</u>

**12. MOVEMENTS IN RETAINED EARNINGS**

(i) **Assets acquired free of liability**

The assets acquired free of liability account was established in 1990 to recognise property, plant and equipment which had been acquired prior to 1990 and which had previously been treated as an expense in the year of acquisition. On 1 January 1992, the balance in the account was transferred to accumulated funds (refer note 1(a)(iii)).

1991 \$		1992 \$
115,332,424	Balance at the beginning of the financial year	67,180,661
4,948,104	Less adjustments to assets (refer note 13)	—
9,816,560	Buildings incorrectly included	—
—	Transfer to accumulated funds	67,180,661
<u>100,567,760</u>	Amended balance at the beginning of the financial year	—
	Less:	
27,834,192	Loss on revaluation of buildings	—
587,692	Loss on demolition of buildings	—
257,138	Disposal of assets	—
4,708,077	Transfer to income and expenditure statement	—
<u>67,180,661</u>	Balance at the end of the financial year	<u>—</u>

(ii) **Loan repayment reserve**

The loan repayment reserve was established in recognition of the University's liability to repay a \$3,300,000 bank loan used to finance additional student accommodation. In 1992 the reserve was used to pay out loans to the National Australia Bank and the Commonwealth Bank (refer note 9)

165,000	Balance at the beginning of the financial year	441,158
-	Less adjustment to accumulated funds	105,520
165,000	Amended balance at the beginning of the financial year	335,638
276,158	Transfer (to)/from accumulated funds	(335,638)
\$441,158	Balance at the end of the financial year	-
1991		1992
\$		\$

(iii) **Asset revaluation reserve**

\$486,381	Balance at the beginning and end of the financial year	\$486,381
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(iv) **Major repairs and replacement reserve**

The major repairs and replacement reserve was created for student residences only which are expected to be fully self-supporting. Prior to 1992 this account was treated as a provision (refer note 1(a)(i)). The reserve has been established as a contingency to meet the cost of major repairs and replacements.

	1992
	\$
Transfer from accumulated funds	577,605
Less transfer to accumulated funds	265,618
Balance at the end of the financial year	\$311,987

13. The accumulated funds balance at the beginning of the financial year has been adjusted as follows:

Balance reported at 31 December 1991	9,953,828
Add transfers (refer note 1(a)(ii) and (iii))	
- Grants received in advance in 1991	13,222,331
- Deferred income	21,233,896
- Assets acquired free of liability (refer note 12(i))	67,180,661
Adjustment to loan repayment reserve (note 12(ii))	105,520
Miscellaneous adjustments	32,734
	111,728,970
Less grants accrued in 1991 (refer note 1a(ii))	160,000
Amended balance at the beginning of the financial year	\$111,568,970

14. **COMMITMENTS**

The following capital projects were contracted for on the basis that funds would be made available under Commonwealth legislative provisions and from University development funds and an internal loan.

	1993 commitment \$million	1994 commitment \$million
Keira View academic building	6.000	0.246
Campus East - student accommodation	.330	
Union Hall refurbishment	2.784	
Engineering building refurbishment	1.718	
Communications building	3.772	
Health Sciences building	.146	5.000
Visitors lodge	.566	
Total	\$15.316	\$5.246

## 15. CONTINGENT LIABILITIES

- (i) In 1987, 1990 and 1991 the University furnished letters of comfort to the National Australia Bank Limited in support of loans given to the University of Wollongong Union, the University of Wollongong Recreation and Sports Association and the Illawarra Technology Corporation Ltd. These arrangements do not involve the University in any undertaking to pay any shortfall in repayments. A similar letter has been provided to the National Australia Bank in 1992 in support of a further loan given to the University of Wollongong Union.
- (ii) As at the end of the financial year, the University has a credit facility of \$400,000 in respect of Mastercard business cards. Of this amount \$125,000 has been allocated in respect of Mastercards issued to University departments. \$275,000 remains unused.
- (iii) The University has negotiated the purchase of student accommodation known as Gundi for a purchase price of \$1,000,000. Subject to satisfactory title searches and conditions to be approved by the Minister for Education and Youth Affairs and Minister for Employment and Training, settlement is expected to take place in February 1993.
- (iv) At its meeting on 13 December 1991 the Council of the University resolved to transfer the ownership of the Illawarra Technology Corporation Ltd (ITC) buildings and the attaching liabilities from ITC to the University. These buildings had been constructed by ITC on University land which was leased by the University to ITC.
- Approval for the transfer of the building and the borrowings was granted by the Minister of Finance and confirmed by the Ministry of Education and Youth Affairs (NSW) in a letter dated 13 February 1993. The transfers which are to be effected in 1993 will result in a net cash inflow of \$424,817 to ITC as follows:

	\$	\$
Written down value of building		8,927,751
Less: Sundry advance (refer note 23)	2,000	
National Australia Bank loan to be transferred	6,500,934	8,500,934
Balance payable to ITC		<u>426,817</u>

- (v) In December 1991, the Commonwealth government approved the establishment of a Co-operative Research Centre (CRC) for Materials Welding and Joining of which the University is a member. Action is being taken to incorporate the CRC under Corporations Law. In 1992 the University contributed \$35,000 in cash and \$55,700 in kind to the CRC. The University has a commitment to contribute \$70,000 in cash per annum and \$5,598,300 in kind for salaries, equipment, use of facilities and other expenses over a 7 year period:

	Cash	In Kind
1992	35,000	55,700
1993	70,000	768,000
1994	70,000	935,000
1995	70,000	895,500
1996	70,000	895,500
1997	70,000	882,000
1998	70,000	882,000
1999	35,000	284,800
Total	<u>\$490,000</u>	<u>\$5,598,500</u>

- (vi) In December 1992 the Commonwealth government approved the establishment of a Co-operative Research Centre (CRC) for Intelligent Manufacturing Systems and Technologies of which the University is a member. The University has a commitment to contribute \$10,000 cash per annum and \$3,728,000 in kind to cover salaries, equipment and other expenses over a 7 year period as follows:

	Cash	In Kind
1993	10,000	398,000
1994	10,000	555,000
1995	10,000	555,000
1996	10,000	555,000
1997	10,000	555,000
1998	10,000	555,000
1999	10,000	555,000
Total	<u>\$70,000</u>	<u>\$3,728,000</u>



# 16. GOVERNMENT GRANTS

(i) Income		1992
1991		\$
\$		\$
	Commonwealth Government grants	
58,340,000	Recurrent [Note 16(ii)]	55,003,100
5,443,672	Research	6,767,839
582,700	Other	683,898
	State Government grants	
27,990	Conservatorium of Music	26,528
2,940,144	Nurse education	2,862,554
249,370	Research	299,425
325,490	Other	242,476
574,062	Deferred grants (refer note 1(a)(ii))	-
<u>\$68,483,428</u>	Total Government grants	<u>\$65,885,820</u>
(ii) Commonwealth Government recurrent grant		
	Amount received from Commonwealth	
48,954,000	Government for recurrent	44,412,950
9,386,000	Balance of HECS Trust Fund grant (Refer Note 18)	10,590,150
<u>\$58,340,000</u>		<u>\$55,003,100</u>

The 1992 Commonwealth Government recurrent grant excludes \$9,530,900 received in 1991 for the 1992 year. This amount has been credited to accumulated funds in accordance with changes in accounting policy (refer note 1(a)(ii)).

# 17. AMOUNT OWING BY COMMONWEALTH/STATE GOVERNMENTS

The State Grants (General Revenue) Amendment Act 1987 indicated that the Commonwealth Government, and the New South Wales State Government will share superannuation costs in a way that recognises the respective responsibilities of Commonwealth and State Governments which prevailed when the liability was incurred.

In 1992, a debit amount of \$1,681,245 was brought to account to reflect the decrease in the net unfunded past service cost for State superannuation (refer note 10(iii)).

1991		1992
\$		\$
29,907,764	Amount owing for unfunded liability at the beginning of the financial year	52,671,791
22,764,027	Increase/(decrease) in amount owing for unfunded liability	(1,681,245)
<u>\$52,671,791</u>	Amount owing for unfunded liability at the end of the financial year	<u>\$50,990,546</u>

# 18. HIGHER EDUCATION CONTRIBUTION SCHEME

In 1989 the Commonwealth Government introduced the Higher Education Contribution Scheme to be collected by the University. Funds collected under the scheme are offset against the legislated grant from the HECS Trust Fund.

In 1992 an amount of \$1,915,000 of the \$2,233,317 reported in the combined income and expenditure statement was withheld from the legislated grant, being the amount estimated to be collected. A further \$300,000 will be adjusted by the Commonwealth Government in 1993 in respect of the HECS Trust funds. The balance represents fees paid by students after the audit date for reporting to the Commonwealth Government.

# 19. INVESTMENT INCOME

1991		1992
\$		\$
	Income earned:	
1,576,889	Government and semi-government securities	1,581,245
1,996,102	Term deposits and bank deposits	979,131
254,403	Other	49,880
<u>\$3,827,394</u>		<u>\$2,610,256</u>

1991		1992
\$	Distributed as follows:	\$
799,518	Transfer to provisions	515,213
102,287	Transfer to trust funds	106,548
137,454	Special purpose accounts	88,465
2,788,135	General university funds	1,900,030
<u>\$3,827,394</u>		<u>\$2,610,256</u>

## 20. FEES

1991		1992
\$		\$
10,033,353	International student fees	12,162,493
4,029,562	Student residences	4,759,337
390,078	Other	454,522
<u>\$14,452,993</u>		<u>\$17,376,352</u>

## 21. OTHER INCOME

1991		1992
\$		\$
1,087,633	Research	1,678,809
572,608	Scholarships and prizes	750,293
4,035,221	Special purpose accounts	4,362,298
585,314	Other	940,069
<u>\$6,280,776</u>		<u>\$7,731,489</u>

## 22. GRANTS FOR CAPITAL PURPOSES

	1992
	\$
Government grants for capital works	8,629,000
Government grants for equipment	200,000
	<u>\$8,829,000</u>

## 23. ASSISTANCE TO ASSOCIATED ORGANISATIONS

The following assistance was made to organisations associated with the University.

Friends of the University of Wollongong Ltd	- \$43,000 operating grant
	- free use of office space
University of Wollongong Foundation Ltd	- free use of office space
Illawarra Technology Corporation Ltd	- \$79,962 grant for interest relief
	- payment of part Managing Director's salary
	- free use of University Centre, Sydney
	- Interest free advance of \$2,000,000
	- pending purchase of buildings (refer note 15(iv))
University of Wollongong Union	- Salary of Secretary/Manager paid by University
	- Operating Grant to Kids Uni \$175,253
University of Wollongong Recreation and Sports Association	- Maintenance of sportsgrounds \$77,362

The assistance provided to these organisations is more than offset by cash donations made to the University by some of these organisations, and the benefits accruing to the University, its students and staff through enhanced facilities, community relations, marketing, funding and repute.

All other identifiable costs and services relating to companies and organisations associated with the University are charged out to those entities under normal commercial terms and conditions.

## 24. AUDIT FEE

The fee paid to the Auditor-General for auditing services in 1992 was \$60,080 (1991 \$52,000). The Auditor-General received no other benefits.

25. The Statement of Income and Expenditure has been prepared in accordance with the Public Finance and Audit (Statutory Bodies) Regulation, 1985. This statement combines a number of funds which, under granting conditions, can be utilised only for specified expenditure purposes. These special funds cannot be allocated to general purpose expenditure categories.

26. In accordance with Section 41B(1)(d) of the Public Finance and Audit Act 1983 and the Public Finance and Audit (Statutory Bodies) Regulation, 1985 a summary of land owned or occupied by the University together with the values thereof accompanies these Financial Statements. This summary has not been audited.

## END OF AUDITED FINANCIAL STATEMENTS

## NOTES





## NOTES

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